the NORTHWESTERN MILLER

THE INTERNATIONAL MAGAZINE
FOR THE GRAIN, MILLING
AND BAKING INDUSTRIES

RIBBON-CUTTING AT KANSAS STATE UNIVERSITY

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Volume 265 MAY 29, 1961 Number 11

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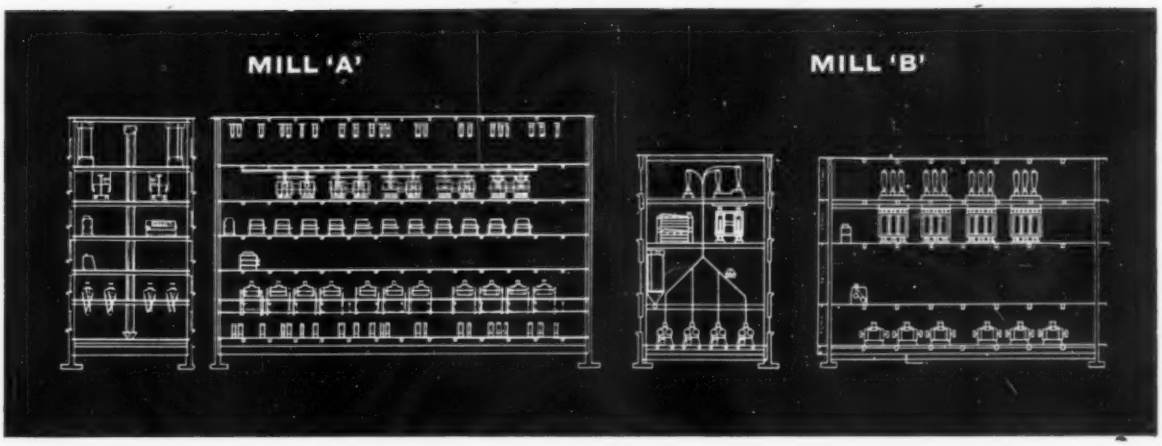

Take a good look at the two mill layouts shown above. Both mills produce the same output but Mill 'B' costs less than half the other! Why? Because Mill 'B' has modern high capacity Robinson equipment which gives the same output from fewer machines in less space and with reduced overall capital costs. The saving does not end there! With fewer but more efficient machines there are further savings on insurance, labor, maintenance, power and depreciation.

LET THE FACTS SPEAK FOR THEMSELVES!

Plant and capital cost breakdown (Screenroom omitted)

	PLANT				BUILDING		
MILL 'A'	TYPE	NO.	SIZE	TOTAL SURFACE	FLOORS	TOTAL FLOOR AREA	TOTAL COST
	Rollermills	44	10 in. × 40 in.	3,520 in.	6	26,904 sq. ft.	$675,125
	Plansifters	10	6 section 12 sieves deep	3,595 sq. ft.			
	Purifiers	11	Double 450 mm. sieves	211.2 sq. ft.			

	PLANT				BUILDING		
MILL 'B'	TYPE	NO.	SIZE	TOTAL SURFACE	FLOORS	TOTAL FLOOR AREA	TOTAL COST
	Rollermills	24	10 in. × 40 in.	1,920 in.	4	8,704 sq. ft.	$330,550
	Plansifters	4	6 section 24 sieves deep	1,355 sq. ft.			
	Purifiers	6	Double tier double 450 mm. sieves	220 sq. ft.			

SAVINGS: Capital cost $344,575. Space 18,200 sq. ft. Machines 31

(These estimates are based on European construction costs)

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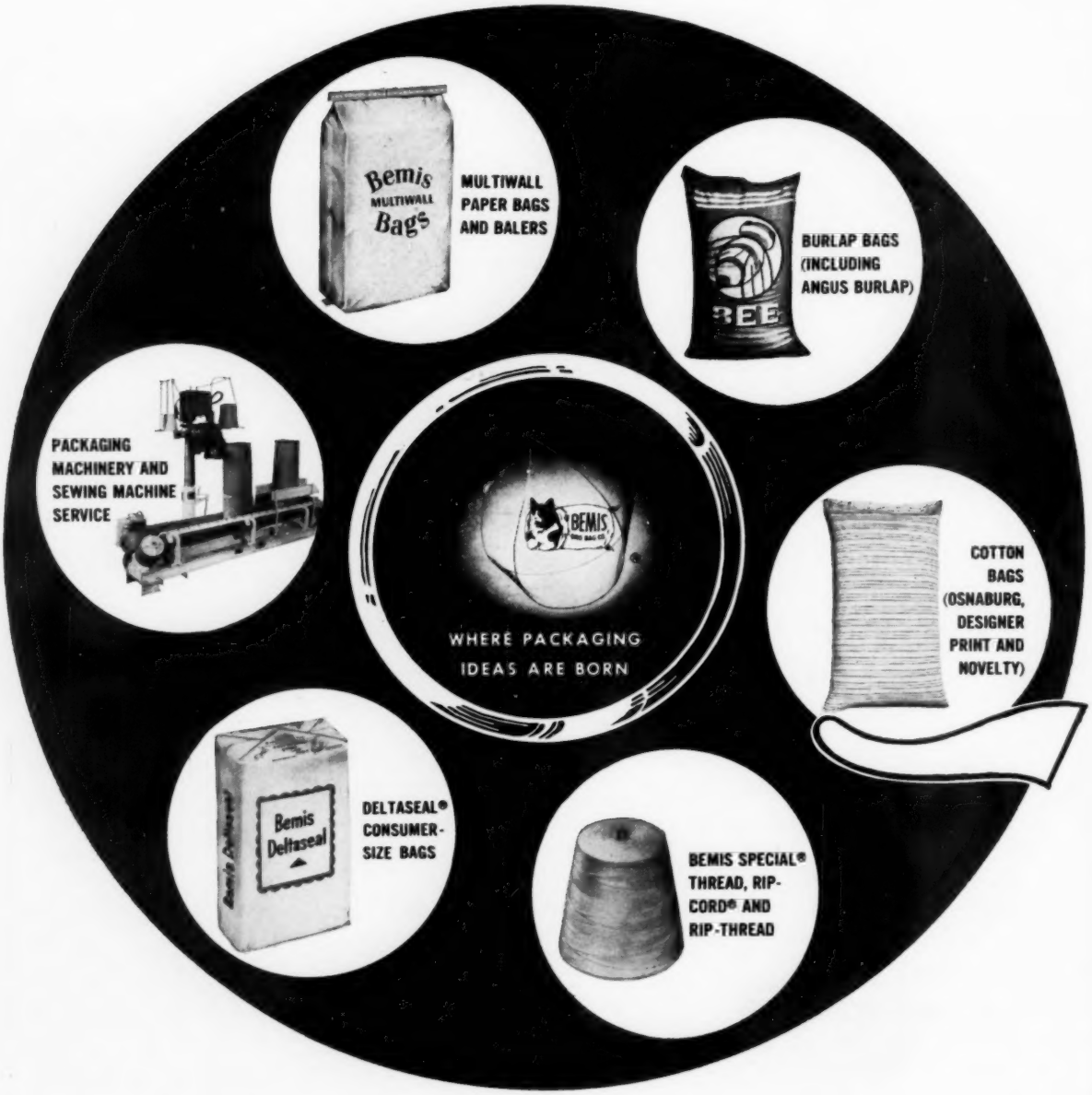
Bemis MULTIWALL Bags
MULTIWALL PAPER BAGS AND BALERS
BEE
BURLAP BAGS (INCLUDING ANGUS BURLAP)
PACKAGING MACHINERY AND SEWING MACHINE SERVICE
BEMIS
WHERE PACKAGING IDEAS ARE BORN
COTTON BAGS (OSNABURG, DESIGNER PRINT AND NOVELTY)
Bemis Deltaseal
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BEMIS SPECIAL® THREAD, RIP-CORD® AND RIP-THREAD

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the NORTHWESTERN MILLER®

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May 29, 1961

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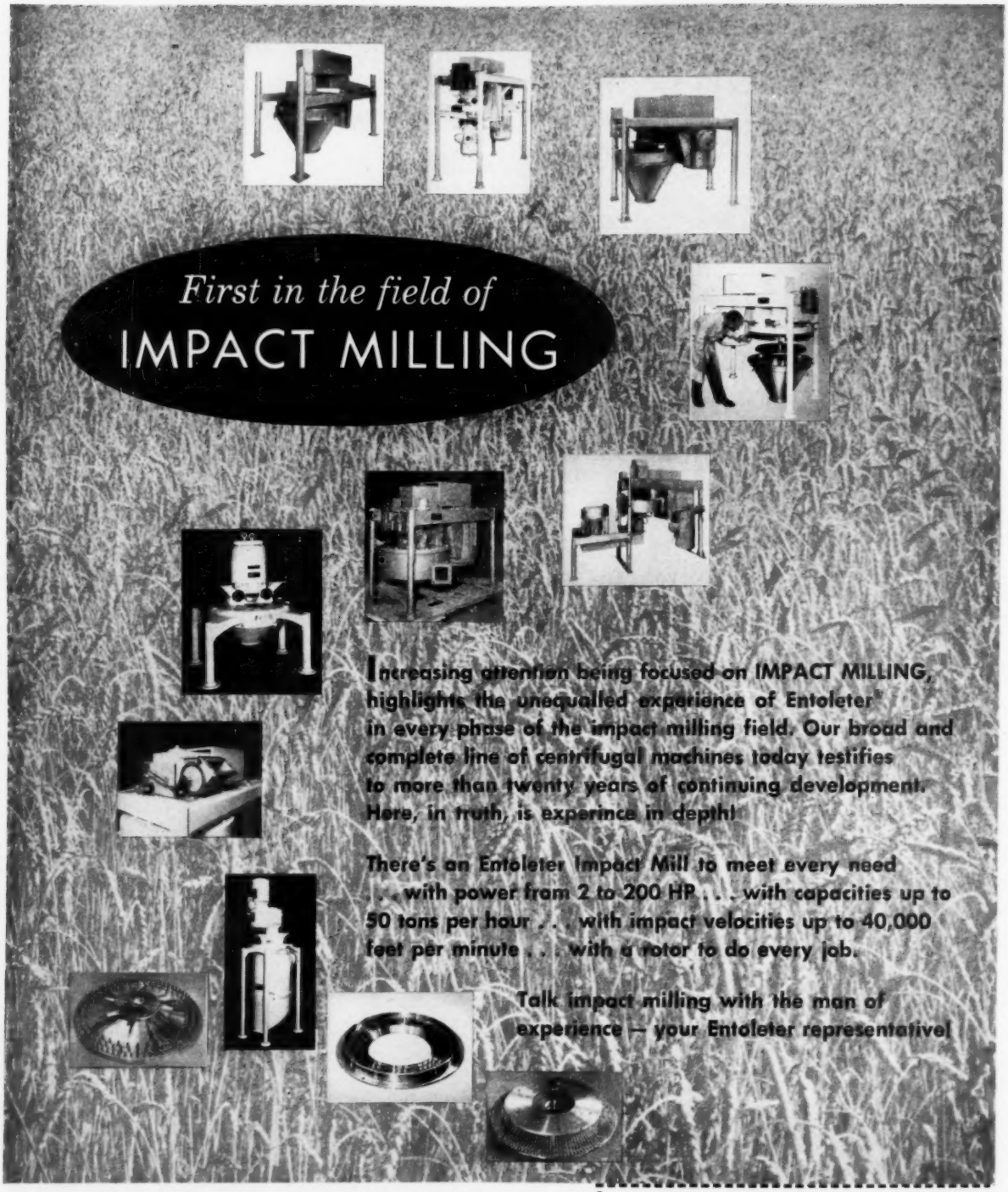
COVER PICTURE—

John Vanier, president of Western Star Mill Co., has just cut the ribbon to open Kansas State University's new milling technology building, as Ellis English, Archer-Daniels-Midland Co., president of the Millers National Federation, watches. (For a report on the dedication and wheat field day, turn to Page 62.)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INDUSTRY RECORD . . .
An account of Trade Affairs and Events

GMI Research Center Honors James F. Bell

General Mills, Inc., will name its new research center after **James Ford Bell**, in honor of the late founder of the company who died May 7. The new center, located in Golden Valley, Minn., will start second stage of construction by the end of May, the company has announced. First section, completed in December, 1960, totals some 74,000 sq. ft. of space. The new section will cover about 170,000 sq. ft., is scheduled for completion in the fall of 1962. A third section of the James Ford Bell center will be added later.

●

ADM Reports Earnings, Declares Dividend

Earnings of $2,914,437 for the nine months ended March 31, 1961, have been reported by Archer-Daniels-Midland Co. A dividend of 50¢ a share payable June 1 to shareholders of record May 22 was declared, according to **John H. Daniels**, ADM president. The company has 1,589,315 shares of stock outstanding.

●

Baking Executive Resigns Position

Fuchs Baking Co., South Miami, Fla., has announced resignation of **Jodean P. Cash**, president. Mr. Cash, also a major stockholder of Holsum Bakers of Puerto Rico, Inc., said he needs to devote more time to this business. Succeeding Mr. Cash as president of Fuchs is **L. L. Chandler. R. E. Chivers**, vice president, becomes general manager.

●

Universal Foods Becomes Division of Red Star

Managements of Universal Foods Corp., Chicago, and Red Star Yeast & Products Co., Milwaukee, which recently merged, have announced plans for expanded services and diversification under their unified setup. Arrangements of the merger will make Universal a division of Red Star, to be known as Universal Foods Division. **Russell D. L. Wirth**, president of Red Star, said that Universal will continue to operate under its own management, headed by **David H. Flaxman**, vice president and general manager of the division. Mr. Flaxman has also become a director of Red Star.

●

Scandinavian Group Visits U.S. Offices

A group of five Scandinavian millers visited offices of the Millers National Federation and the Wheat Flour Institute, Chicago, as one stop on a tour of the U.S. under sponsorship of Great Plains Wheat, Inc., in cooperation with Foreign Agricultural Service of USDA. Included with the visiting delegation are **Yngve Friis**, Oslo; **Anton Pedersen Ranlov**, Copenhagen; **Gustaf Rehnby**, Stockholm, and **Risto Vasara**, Helsinki. Accompanying the group is **Henning Vontillius**, grain consultant in Rotterdam office of Great Plains Wheat, Inc.

●

Dividend Declared by Seaboard Allied

Regular quarterly dividend of 7½¢ on common stock of Seaboard Allied Milling Corp. will be paid on June 10, 1961, to stockholders of record on June 1, 1961, according to **Otto Bresky**, president. Dividend is payable on 932,667 common shares. Stockholders also have approved change in conversion rate of firm's Class B common stock (American Exchange). Class B common becomes convertible on basis of four shares for one share of common. There are 1,700,469 shares of Class B common which will be exchanged as soon as practical. Prior to change voted by stockholders, Class B common was exchangeable on basis of two shares for one share of common at rate of 10% annually over next nine years.

●

Netherlands Firm Bought by AMF

American Machine & Foundry Co., New York, has acquired Bakovenbouw voorheen H. P. den Boer N.V., 70-year-old bakery machinery company of Dordrecht, The Netherlands, according to **Frank X. White**, president of AMF International. The Netherlands firm manufactures various types of ovens and other bakery machinery, including proofers and conveyors.

●

Nebraska Mills Reports Increased Earnings

Earnings of $947,787, increase of 349% over the corresponding period last year, were reported by Nebraska Consolidated Mills Co., Omaha, for the 40-week period ended April 9, 1961. According to announcement by **J. A. Mactier**, president, per share earnings were $1.69, compared with 49¢ last year. Mr. Mactier presented figures for the 40 week period: Net sales, $43,398,838; consolidated operating profit, $2,140,019; net income before taxes on income, $1,764,787; provision for income tax, $817,000; consolidated net income, $947,787.

●

Atkinson Memorial Fund Announced

Establishment of a memorial fund in honor of the late **Fred Atkinson**, president of Atkinson Milling Co., Minneapolis, has been announced by **Dr. John A. Shellenberger**, head of the department of flour and feed milling at Kansas State University, Manhattan. The appropriation will be known as the Fred Atkinson Memorial Fund.

AOM ANNOUNCES GOLD MEDAL AWARD

The Association of Operative Millers has announced the establishment of a Gold Medal Award. The purpose is to recognize and promote outstanding contributions by individuals to the milling industry in the fields of endeavor represented by the active membership of the association. Membership in AOM, however, is not a pre-requisite. Only one award will be granted in any one year. The award committee is made up of three immediate past presidents of the association.

The AOM Comes To Minneapolis

ONE OF THE MOST OUTSTANDING technical conferences and trade shows in the long, distinguished history of the Association of Operative Millers closed its sessions in Minneapolis May 25. The wealth of technical papers presented, the high emphasis on "What's New" and available in the line of equipment and services to the industry—even the attendance—may well set some new records for the association's notebook.

Visitors, AOM members and their guests from foreign countries were present on every hand to take a close look at what AOM is accomplishing by its exchange of technical information. And the visitors, in their turn, displayed their equipment and services for advancing the world-wide cause of the milling industry.

High point of the four-day conference and trade show—although there actually were several ranking at the top—was AOM's annual banquet held in the main ballroom of the Hotel Pick-Nicollet.

(For Election of Officers See Page 68)

Allied tradesmen representing scores of firms kept the entertainment side of the conference and trade show lively and entertaining. The peak of their efforts—climax of months of work and planning—was a reception for AOM members, their wives and guests, which packed the hotel ballroom. The entertainment was topped with an extravaganza on ice.

On the "day side" of the conference, allied men again performed their yeoman duties of manning exhibits which brought before millers the ultimate in equipment, machines and services coming into industry usage.

For the ladies, there was a style show, special breakfast and luncheons, and the rounds of stores for shopping tours.

With the sessions adjourned May 25, special transportation was provided to take those wishing "a little more" on tours of allied firms in the Minneapolis area and to the Tennant & Hoyt mill at Lake City, Minn.

The meat of the four-day conclave was its technical sessions, as usual with AOM. Capsule reports of these follow.

What's New?

Force Flow Packer

Automatic and simultaneous filling and weighing of multiwall paper valve bags through use of a Force Flow packer designed to handle a wide range of products at low, medium and high packing rates, was the topic of H. J. French, St. Regis Paper Co.

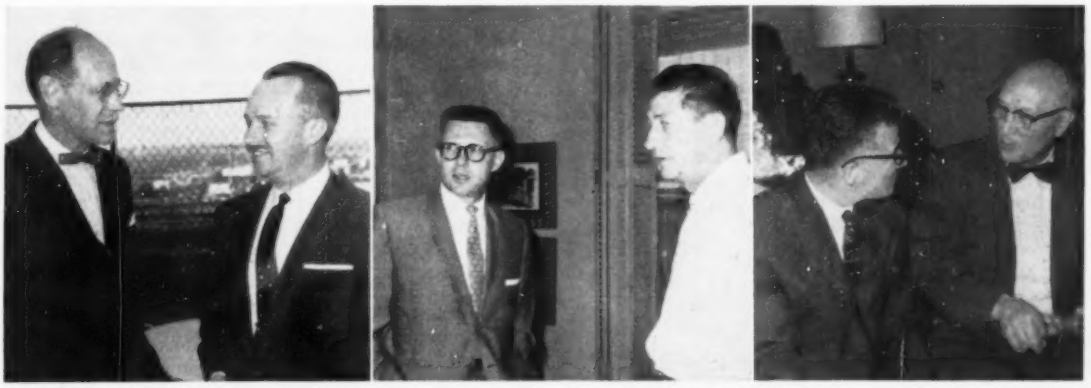
The Force Flow packer, introduced in 1959, was described as consisting of a pressure chamber, flexibly connected to a filling tube mounted on a scale, with air introduced into the pressure chamber through a porous pad at the base and through an inlet at the top. Further, a controlled opening at the top serves as a feed gate.

When the packer goes into action, material is fed into the pressure chamber at the top, being brought to the chamber either by a feeder or by gravity from an overhead bin. Compressed air flowing through a pad at the base of the chamber flows through the entering material, bringing it quickly to a state of fluidity and maintaining this state until the bag is placed on the filling tube and

Association of Operative Millers Proves It Has Everything Necessary to Attract Membership to Annual Technical Conference and Trade Show. Program Rated Tops In Technical Presentations, Outstanding Exhibits, Ladies' Program, Banquet

The Camera Focuses on AOM's Conference

THE FELLOWS LOOKING into the camera are Guenter Zimmer, MIAG Northamerica, Inc.; Dr. Heinz Gehle, technical director of MIAG, Brunswick, Germany, and Hans Koch, also of MIAG Northamerica. Center are M. L. Olson, Simon-Carter Co., and James C. McNeil, the Pillsbury Co., both of Minneapolis. At the right are Felipe Salete and Brad Zimmerman, son of O. J. Zimmerman of Smico Sales, Inc. Mr. Salete is with Morros, S.A., Mexico City. (All identifications are left to right.)



CONVERSATION IN the first photo goes on between M. C. Barnes, Bemis Bro. Bag Co., and George Parry, Universal Milling & Machinery, Ltd. Centered are Douglas Merritt, Commander Larabee milling division of Archer-Daniels-Midland Co., and George Smutny, Entoleter, Inc. Engaged in what appears to be a serious discussion at the far right are: R. J. Hoskins of Entoleter and O. J. Zimmerman.

THE LADIES found AOM of high interest, too, as evidenced by the concentration of Mrs. O. J. Zimmerman, Minneapolis, and Mrs. William J. Ball, Kansas City. In the center, Robert J. McDonald, Bemis packaging service, is pictured with AGM's genial executive vice president, Donald S. Eber, and Tibor S. Rozsa, the Pillsbury Co. At the right are Mr. and Mrs. Abel Morros, of Morros, S.A., Mexico City.

the start button momentarily depressed.

Bags are filled by depression of a stop button, whereupon the following functions were said to occur: Filling tube cut-off opens; chamber air supply inlet opens; chamber decompression valve closes; feed gate closes; bag clamp locks and bag chair retracts after controlled delay.

Immediately following this operation, compressed air flows into the chamber from a blower, causing pressure to rise within the chamber and forcing the material in the chamber into the bag. When predetermined weight is attained, movement of the scale actuates a signal which causes further action — filling tube cut-off closes; chamber air supply inlet closes; chamber decompression valve opens; feed gate opens after controlled delay; bag clamp releases also after controlled delay and bag chair discharges. With this occurrence, material again flows into the chamber. The filled bag is removed and a new bag placed on the filling tube and the cycle repeats.

Mr. French pointed out the flexibility in coupling productive capacity of the machine through provision of 1, 2, 3 or 4 tube units. He stated that, in general, production will range from 3 to 6 bags min. per tube. Tests on bakery flour indicate a production of 4 cwt. min. per tube.

Descriptive material was given on a Poly-Lok closing sleeve and stepped end pasted bag, which requires no sleeve tucking, sewing or pasting, but gives an effective automatic closure of the bag.

●

Rolfes Level-trol

A multi-purpose unit to inventory the level of stored granular solids quickly and easily was described by John E. Childs, chief engineer, Rolfes Electronics Corp., Boone, Iowa. The unit also monitors loading and unloading of bins.

Explaining operation of the unit, called "Monitrol," Mr. Childs described it as a comparatively simple but unique mechanism which lowers a weight into a bin until the weight touches an obstruction. At this instance, the unit stores the level information, which remains stored until instructed to cancel and seek a new sounding. The weight is of aluminum, making it spark proof. Total construction of the mechanism is to specifications of underwriters requirements for use in hazardous atmospheres containing grain dust. Further safety measures were noted in the remote unit in the form of a safety switch which would allow the motor to develop full power should the weight become covered with grain.

The remote Monitrol unit may be installed either below or above the bin top slab. Installation above is accomplished with support of a 2-in. pipe which also serves as a tape guide and stopping bumper for the sounding weight.

In pointing out advantages of the installation Mr. Childs stated that it enables the operator to inventory his complete storage facility by commanding all units into operation. Total time for storing the information is about 2 min. Quick scanning of collected data is accomplished by turning a selector switch from bin to bin, with the average operator able to record level information at the rate of one bin each six seconds. A "continuous indicate" position on the console of the unit allows an operator to watch loading and unloading of a bin, with the unit sensing and storing a new reading once each five seconds.

●

Car Unloader

Information on the latest developments of the Superior grain car unloader highlighted by a film to illustrate the talk, was given by Tom Hartman, Superior Division of the Daffin Corp.

Tom Hartman

Prior to presentation of the film, Mr. Hartman explained that approximately 12 years of developmental work had gone into the unloader, highlighted by a film to illuscomplished by Vic Anderson of Duluth. With the assumption of manufacture by Superior over a year ago, additional changes have been made to increase the unit's durability and better its operation.

The film featured the most recently completed all-Superior built machine taken at Superior's Hopkins factory prior to installation in a plant in Tennessee.

In describing the structure and functioning of the unit, Mr. Hartman explained that in actual operation position it is suspended from a 12-in. monorail. At the beginning of the starting cycle the unit is in a folded position and a 5 h.p. motor operating a 5 gal. per minute hydraulic pump is activated. At this time two 300 watt spotlights are turned on, allowing the operator to see both ends of the boxcar. A hydraulic lever controlling the trolley mechanism driving the unit on the monorail is activated and the unit driven into the car. Upon approaching the car, a center paddle conveyor driven directly by a 3 h.p. motor is activated and the unit gradually driven into the car until it is positioned entirely inside.

Side wing conveyors then go into action and the wings are lowered into the bank of grain. Opening and closing the wings are controlled by other hydraulic valves lowered simultaneously or individually into the grain in either end of the boxcar.

Wing Section Opens

With decrease in the grain level and approach of the floor by the first section, the second wing section of the machine opens and lowers into the grain.

As this section approaches the floor, a third section opens. When fully extended, wing sections cover the entire internal surface of the boxcar, pulling grain from both ends to the center. A center conveyor continues to pull grain at a rate ranging from 12 to 15,000 bushels per hour.

At completion of the operation, the unit refolds hydraulically and is extracted from the car by use of a trolley.

Time for the operation was said to vary from 8 to 15 min., depending on the grain and size of load. Mr. Hartman explained that in most cases the grain car unloader could cut the necessary labor force by half or double unloading capacity using the same number of men—with variations in individual situations.

Seven units were said to be in operation at present, with an eighth to be installed within the near future.

In closing, Mr. Hartman stated, "Compared to other boxcar unloading devices, this unit has a very short amortization period due to the low installed cost and savings effected."

●

Packer-Aid

A new High Speed Packer-Aid, incorporating a modern concept of auger flights, along with the development of a completely new Trim-Weigh Scale, were explained by T. I. B. Gray, sales manager, Bemis Packaging Service, Bemis Bro. Bag Co., Minneapolis.

In his opening remarks Mr. Gray

stated that the new unit, using a 25 h.p. motor, working in conjunction with the Trim-Weigh Scale and a Bemis Vee-Trof conveyor, enabled speeds of 10 to 12 100-lb. bags per minute in a two-man operation.

The conveyor has an automatic stop-start action where one bag is being weighed with another immediately following. Also, integral action with the Trim-Weigh scale provides freedom from beam bounce.

The scale provides an automatic revolution counter control, which compensates for any shortage or overage in the desired amount of flour in the bag.

Mr. Gray then introduced the Bemis Auto-Mac, designed for packing flour in multiwall bags to eliminate the necessity of having a man place bags on the packer.

"This means," he said, "you can now have a packing operation which will give you 10 to 12 100 lb. multiwall flour bags per minute with only one man." Pointing out the bag magazine on the machine, he stated that it holds between 250 and 300 bags, requiring replenishment only about three times an hour.

Plans Explained

Finally, he outlined future plans of his company. Notably, these will be development of a packing machine requiring no men on the operation. Also, Bemis hopes to have a production model machine in the near future to eliminate the man at the sewing machine. "This unit is being designed so that it will fit into the Bemis High Speed Packer-Aid and the automatic high speed flour packer without any major adjustments," he concluded.

●

MIAG Multomat

A recently developed, single unit experimental mill, the Multomat was introduced by Hans Koch of MIAG Northamerica, Inc.

Hans Koch

One feature of the new unit was said to be construction with roller mills and sifters built into one frame and only the pneumatic conveying fan and dust collector separately located. In pointing out advantages of the design, Mr. Koch stated that it would allow use of larger roller mill sections with 8 or 12 in. length in order to make any desirable combination for special applications, such as obtaining larger capacities. Further explanation of each part of the unit's basic construction and special features was given.

In describing specific grinding tests and their charted results, he drew a relationship to final use of the experimental mill in commercial milling.

"These figures indicate that the results achieved in a Multomat can easily be interpreted to results which can be achieved in a commercial mill," he said.

Very good results in extraction and ash have been achieved, Mr. Koch stated. This occurred through very careful setting of the grinding rolls, which remain unchanged during tests, and the clean belting action of the sifter.

In explaining further testing of the Multomat, he pointed out that since the milling properties of different wheats and consequently the extraction and ash of flours vary quite a bit, the experimental mill could be a very important tool for research and developmental work. Also, since it allows testing of wheat at an early stage for selection of grades with high milling ability, its value is further enhanced.

"Our work is another step toward understanding more about the raw material which we use 24 hours a day, several hundred days a year in our flour mills, and which influences so much the commercial result of our milling operations," he stated in conclusion.

●

Dehumidifiers

Fulton M. Cooke, general sales manager, Desomatic Production Division, Atlantic Research Corp., Falls Church, Va., described his company's dehumidifiers and compressed air dryers now used in conditioning bulk shipments of flour.

He explained that the relatively new process of loading railroad cars or road trailers from a flour storage bin pneumatically has revealed a requirement for dry air to prevent the formation of a cake of flour inside the exposed surfaces of the car, resulting from variations in temperature and humidity. To aid in preventing this caking action, Desomatic Products manufactures a desiccant dehumidifier which operates on the principle of using a desiccant or inorganic drying agent which does not change its physical state while it is absorbing or giving off moisture.

A desiccant is capable of absorbing moisture from air having wide variations in temperature—its efficiency being a function of temperature and relative humidity and the amount of moisture available to be taken out of the air.

Basic Design

In describing the basic design of the dehumidifier he stated that it consists of two beds of desiccant and two air circuits, each with its own fan, so that while moisture is being absorbed in one bed, the other bed is being dried out by electronic heaters built into the bed. Recent findings indicate that the combination of a desiccant dehumidifier and an aftercooler on the air intake of a fluidizing system will eliminate cake formations in a car. However, it was explained that neither of the latter will achieve the job alone, but when working concurrently produce the required result.

In summary, he pointed out reasons for desirability of the combination system as compared with refrigeration. A refrigeration system that will cool to the desired temperature becomes rather special in design and performance and maintenance requirements, due to constant formation

STUART BUTLER, at the far left, Maple Leaf Mills, Toronto, president of the Association of Operative Millers, was one of the busiest fellows at AOM's 65th annual technical conference in Minneapolis. Here he chats with Oscar Olson, Huntley Manufacturing Co., and T. C. Mills, Ogilvie Flour Mills Co., Ltd., Montreal. At the far right are Mrs. and Mr. Donald Halverson, the Halverson Co., Minneapolis, guests of Tibor S. Rozsa, the Pillsbury Co. Mrs. Halverson is secretary to Mr. Rozsa.

of frost on the cooling coil surface, whereas the combination system presents no frost problems and no danger of freezing—and can even be installed out of doors.

●

Impact Grinders

A review of studies to date using impact grinders before, during and after the milling process was given by Gordon Grosh of Winnipeg.

He explained that studies have indicated impaction of tempered wheat before first break rolls improved the separation of bran from endosperm in subsequent milling of hard wheat by significantly lowering ash content of the flour produced. Further, impaction of hard wheat middlings produced a more superior baking flour, and from appearances the differences in baking quality were in some way related to mechanical damage of the starch during reduction. "Great control of starch damage can be obtained by varying impaction force permitting control of baking properties of the subsequent flour," he said.

Pointing out the impracticability of impaction after conventional milling processes, he indicated that this was attributed to power requirements and inefficiency of size reduction with the finer stock, and that degree of starch damage during impact grinding depends largely on original hardness of the endosperm.

In the area of air classification, he stated that it could be used within the milling flow to remove the finest flour particles before plansifting of coarser stock, reducing greatly the amount of sifter surface required in the mill flow. He also outlined modifications of a typical hard and soft wheat milling flow using impact grinders and air classifiers and illustrated use of new techniques in combination with conventional rolls and plansifters in a theoretical mill.

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More AOM Reports

John Wingfield of Colorado Milling and Elevator Co., representing the association's Instrumentation Sub-Committee, presented a composium on committee findings in the field of instrumentation as applied to the flour milling industry.

Beginning with definitions of both instrumentation and automation as applicable in his report, he stated that through means of a questionnaire survey the committee had attempted to determine past and future usage of instruments and establish a basis for further study. Calculations were made on a five-year average. Findings indicated that during the past five years mills spent an average of $2.93 cwt. of capacity for instruments and expect to spend an average of $5.18 cwt. of capacity within the next five years for new developments and additions to existing instrumentation.

A list of all instrument groups which could be applied to flour milling was then outlined, with general explanations of which instruments would be applied within each phase of the milling process. Some of the segments covered were the wheat house, cleaning house and the milling system proper.

Projected slides were used throughout the presentation, and among these were examples of process instrumentation in present day mills. In describing the advantages and improvements available through instrumentation he stated, "The finished products segment of the mill offers many challenging control points to excite the imagination and also results in down to earth justifications in cost reduction and quality control." Included in this category were weighing, bulk plant binning and blending systems, control and recording of insect fragments before and after binning and special processing, such as flour re-grinding, separation and drying.

In concluding, Mr. Wingfield stated, "This is not star gazing! We cannot afford to glibly recite the old axiom that flour milling was the first automated industry, ala Oliver Evans. We must, and I'm convinced we will, continue to make vast strides to update our processing procedures and prepare for the future."

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Measuring Wheat Value

W. C. Shuey, General Mills, Inc., discussed various factors entering into measuring the commercial value of wheat and its milling characteristics.

W. C. Shuey

He stated in opening that many different criteria are used as a basis for measuring milling value and characteristics, making it extremely difficult for wheat breeders to develop new strains of varieties that possess the desired characteristics.

A detailed discussion of flour ash was given and, it was stated, that if properly understood, one method of evaluation could be derived from knowing and properly using mineral content or ash. Among influencing factors in flour ash were environmental influences, including location and climatic conditions, hereditary influences or variety and physical influences or cleaning, tempering, extraction, handling and storage. Projected slides were used in this presentation and details of laboratory tests given as examples of each of the categories.

"As we begin to understand more and more the milling characteristics of wheat and the functions of mills and what they do, we attempt to understand more about our experimental milling techniques. But to intelligently evaluate our results, we must first understand what causes the ash, then how we can compensate by reasoning the whys and wherefores of the ash," he said.

Mr. Shuey pointed to experimental milling of wheat as the most important technique in bridging the gap for evaluating wheat. Two major objectives of experimental milling were said to be ability to accurately predict the milling performance of any given lot or mix, and ability to produce test flour similar in physical characteristics to commercially milled flour. This would include ability to duplicate results at any time. The value of the experimental mill was then discussed as it relates to the miller.

In summary, Mr. Shuey stated that basically, for the commercial evaluation of wheats, one must know and understand all factors that influence milling characteristics. When properly applied, they can be useful and aid in understanding mill performance, he said.

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Kansas State—Its Value to Milling

R. B. Laing, vice president and general manager of the Abilene (Kansas) Flour Mills Co., and member of the Millers' Advisory Council to Kansas State University, commented on values of the university as a training ground for personnel to the industry. "A perusal of your technical program and of your exhibits here can lead only to the conclusion that the technical skills required in this industry are increasing at an accelerated rate," he began.

Mentioning automation, he pointed out the fallacy of any belief that the technician of the future will possess

the single ability of knowing how to push buttons on a control panel. Instead, a constant upgrading of talents will be necessary, because with each improvement will come more questions to be answered and more problems to be solved, he stated.

The source of this upgrading of talents was said to rest almost solely with Kansas State University. Here, after receiving a thorough background in basic sciences, students are given specialized curricula in mill operations, cereal chemistry or mill management. "The graduate of this curriculum thus comes to his employer as a well-rounded, well-trained member of the mill staff who fits in with the modern requirements of milling operations," said Mr. Laing.

In elaborating on the value of having a university trained staff member, Mr. Laing stated that the smaller and medium sized mills would probably profit even more than the larger plants because the judgments of a college trained milling technician added to the relatively small management group would be most worthwhile. Also, he pointed out that a skilled milling technologist is no longer considered a luxury but rather an urgent necessity.

Discussing areas in which the industry could aid the school and also actions already taken in this line, Mr. Laing described a colorful brochure that had been prepared to recruit prospective students. Further, milling management is being urged to participate in high school vocational day programs and to make personal contacts with prospective students of their acquaintance. "I urge each one of you to be a promoter of the milling department among your own kin and acquaintances. It will be through such contacts that milling will be supplied with the skilled technicians it so urgently requires," he stated.

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General Maintenance

Don Pollei of The Pillsbury Co. discussed general maintenance of a large flour mill from its initiation with the decision to buy a new machine, process or building, to installation and routine upkeep after installation has been achieved.

Don Pollei

Dividing general maintenance into two major categories, he defined them as productive, including milling machinery and all other machinery essential to the manufacture and packaging of the product, and non-productive, which was described as buildings, railroad tracks, sprinklers, parking areas and others indirectly connected with manufacture.

"Preventive maintenance is the best maintenance," he said, in speaking of the various types of maintenance required and suggested procedures for achieving them. Among preventive methods suggested were check lists, machine cards covering all pieces of equipment with essential information entered on the card, visual inspection, master lubrication check chart or card system on all bearings and good inventory control of maintenance parts.

Specific emphasis is placed on a card system so that nothing is left to memory. He stated that with the card system it is possible to set up a cost accounting control system by posting the cost of materials and labor to the machine card. This provides a method of pointing out areas where corrective measures should be taken to reduce costs. Work sampling or observation and fact gathering was pointed up as one possible way of obtaining good money saving ideas.

Corrective maintenance was said to vary with individual plants and situations. However, all suggested procedures were said to be applicable to the non-productive phase of maintenance as well as to productive care. Several specific types of non-productive maintenance were mentioned including painting, selection of proper windows and floor maintenance.

Finally, relating maintenance cost to cents per hundredweight of manufacturing cost and review and examination of all phases of operation at regular intervals were stressed as an integral part of maintenance. "Each change that is made could reduce fixed assets, free machines for increased production and up-grade fixed assets," he said.

●

Maintenance Planning

Maintenance planning and scheduling, aimed at improved utilization of men and materials, was the subject of a paper given by K. M. McBrady of The Quaker Oats Co.

In illustrating expansion of maintenance with the introduction of automation and use of preventive maintenance, it was first pointed out that the modern maintenance department is similar to all other departments of a plant, including payroll, use of raw materials, production of a finished product and employment of personnel, with resulting administrative problems. "It is not enough today to think in terms of maintenance as a service alone. A broader outlook must be taken, based on the concept of not only providing service, but providing it in as efficient and economical manner as is possible," Mr. McBrady stated.

Steps in planning and scheduling were then listed and explained. First is determining the maintenance work required by various departments by use of job sheets or work requests. Once this information is compiled, the next step is preparation of a job or work sheet in master form to include the whole week. This step includes meeting with each operating department and reviewing the backlog of requests in order to give priority to jobs that seem primary to proper functioning of the plant. The master schedule is then broken down into daily schedules and re-adjusted as the week progresses and jobs are concluded.

K. M. McBrady

Division of reporting into two separate entities, planning and actual execution of the work, with each reporting to the plant engineer, was suggested as a method of checks and balances on effectiveness of the program. This has the dual purpose of freeing the foreman from the planning function. "To have your foreman free to supervise his people is one of the greatest tools for improvement in itself," concluded Mr. McBrady.

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Electrical Maintenance

R. W. McSherry, General Mills, Inc., spoke on "Yardstick for Electrical Maintenance." Members of the association were advised of some specific areas to examine in evaluating and improving their electrical maintenance programs.

R. W. McSherry

"We must not be guilty of retarding utilization of electrical energy by the lack of intelligent application and maintenance," he said.

In listing and explaining areas that could be established or made more effective, he mentioned a good depart-

ment or crew working as a team and providing new ideas, methods of improving the over-all plant and efficiency. He also mentioned provision for proper tools and equipment. Emphasis was placed on establishing and maintaining an effective recording and controlling system for tabulating expenses, equipment data, and other needed information.

A sound, efficient recording system maintains all the important data concerning motors, starters, breakers, heater elements, bearing sizes, shaft sizes, speed, oiling and greasing efficiency, purchase cost and many others which could be cross referenced with equipment records if they are employed, said Mr. McSherry.

An inspection program, coordinated with other phases of an electrical program, was suggested as one way of preventing untimely and costly shutdowns. Ratings of useful life of machinery and scheduling of replacements prior to shutdown were mentioned in this connection.

Physical checks to determine sources of pending trouble were another phase of an effective program which he covered. Coupled with this, are proper maintenance and care of equipment, including a lubrication program employing color codes for determining types of lubricants to be used on specific machinery as well as frequency of use. Detailed information was given on the care of ball bearing motors, individual drive gear motors, motors with flush fittings and relief type grease fittings.

Factor in Savings

Standardization of equipment at time of purchase was pointed out as a major factor in future savings in repair and maintenance. Advantages and specific problems of employing a motor control center were discussed briefly, as well as cleaning and inspection of control wiring.

In explaining ways of protecting investments in electrical equipment, Mr. McSherry pointed out that a ground detector system of some type should be developed. This system is twofold in purpose. First, electrical personnel are given warning to work carefully and, secondly, developing trouble can be located sooner.

Finally, proper identification of all equipment was stressed from the standpoint of safety and ease of repair and removal.

In closing, he stated, "It has not been the primary purpose of this paper to dictate a solution to all our problems, but rather to offer some suggestions, hoping that thought and discussion will be stimulated so that proper selection and application of electrical maintenance can be achieved."

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Principals, Practices Of Plant Maintenance

Principles and practices of large industrial plant maintenance, employing diversified craftsmen with skills varying from engineers, top grade electricians and machine repairmen to unskilled labor, were discussed by R. F. Thuma of Allis Chalmers Manufacturing Co., Milwaukee.

R. F. Thuma

Using his organization as a basis of comparison, Mr. Thuma discussed the division of maintenance into three major areas. They were electrical maintenance, mechanical maintenance and utility services with mechanical maintenance being the largest of the three.

He stated that for many years progressive maintenance management has been fighting the charge that maintenance is a necessary evil. "Maintenance can and should be productive, and the consequences of inadequate maintenance are very serious," he said. He pointed out that the primary goal for every maintenance operation is to provide adequate maintenance service at minimum cost.

Three requirements for a well-managed operation were said to be "knowing what has to be done," "knowing how to do it," and "knowing how well it is being done." Each was discussed in detail.

In stressing the importance of maintenance inspection, he pointed out that inspections should be spaced as far apart as possible to reduce costs, but should stay within safe limits of the time during which difficulties ordinarily develop to the point of needing attention.

Another factor in good maintenance was said to be complete procedures and instructions, specific schedules and independent inspection teams.

Definite organization in practicing good maintenance with well defined responsibility and authority and elimination of duplication of jobs were primary objectives set forth in the category of knowing how to do a good maintenance job. All of the former result from good planning which he stressed throughout and covered in detail, including long-range planning to reduce emergency jobs. Safety was also discussed and suggestions for improvements in this area presented.

"Such accomplishments do not just happen, but require thorough indoctrination and supervision," Mr. Thuma concluded.

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Sanitation

Proper and effective maintenance with goals toward improving and raising sanitary standards was the topic of a presentation by Waldo F. Locke of General Mills, Inc.

Waldo Locke

In discussing maintenance responsibilities he pointed out several major areas where maintenance crews are depended upon for maintaining wholesomeness of the product and cleanliness of plant. They are redesigning and rebuilding old and some new equipment, incorporating self-cleaning features and sanitary design; installing, mounting and locating new equipment to provide work and cleaning space from all angles; making product zones of all equipment quickly and completely accessible for economical and thorough cleaning, and selection and incorporation of suitable and proper materials for construction of food handling equipment. "Inside the milling plant," he said, "the number of maintenance problems is only equalled by the number of sanitation problems. It is in this area where the ingenuity of maintenance people, millers and sanitarians is taxed to the utmost. It is in this area where the need for maximum cooperation by all concerned is absolutely essential."

In conclusion, Mr. Locke drew attention to the many possible spots where leaks and blows occur in most mills. "If a small percentage of all this machinery leaks or blows just a minute percentage of the total product handled over all of the surface involved in the average mill, cleaning becomes a major problem and a major expense," he stated.

'Custom Milling' Development

Spangler Flour Mills Now Tailoring Flour to Customer Specifications with Sturtevant's Classifier, Pulver-Mill

STURTEVANT Mill Co., Boston, with its grain processing division headquartered in Fostoria, Ohio, has announced the successful operation—under actual milling conditions — of two processes on which it has spent considerable time and effort.

Both processes, Sturtevant's milling air classifier and its pulver-mill reduction system, are working, state company officials, for Spangler Flour Mills, Inc. The air classifier is making successful starch-protein shifts in a blend of Pennsylvania red and New York white wheats in Spangler's soft wheat mill at Camp Hill, Pa. High, low and medium protein flours are being produced for the baking industry.

Spangler's sister company at Mount Joy, Pa., is utilizing the Sturtevant pulver-mill to eliminate four processing steps and to replace two double-stand roller mills, several elevators and one sifter.

Sturtevant, in making the report on its initial operations and consequent development, termed use of its processes at the Spangler plants "major firsts" in the milling industry.

Camp Hill Classifier

The 105-cwt.-an-hour Camp Hill mill is now refining flour to customer specifications, producing three basic protein grades from any given mill stream.

The classifier takes mill flour stream produced from a "standard flour" of five breaks, seven reductions, sizing and tailings operations. Flour to be classified enters the unit, falls through a hollow tube onto a disc which revolves and spreads the material out in a thin, whirling veil. Air is drawn upward through the flour to a selector section which removes approximately 8% of the fines. The system ultimately produces three completely new products from the one stream which enters the refining unit. Spangler anticipates that 80% of its flour eventually will pass through the unit.

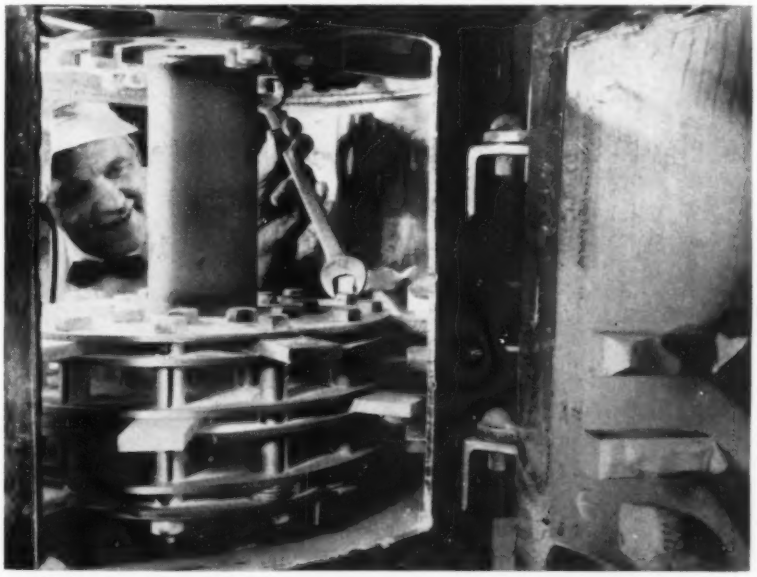
The smaller (43-50-cwt.-an-hour) Mount Joy mill is the first soft wheat mill in the U.S. to incorporate the impact milling step using the Sturtevant pulver-mill, eliminating second, third, fourth and fifth middling reductions, replacing two double-stand roller mills, a sifter and several elevators, and increasing production 10%. The mill handles 30 cwt. or more of the total production.

The pulver-mill receives the first, second, third and fourth breaks redust and all the over-11XX from first midds. and over-12XX from sizings. More than 96% flour grade product is collected in the primary cyclone and secondary filter collector. The small percentage of overs — mostly fibre—are sent to the tail-end mill which formerly was used for six midds. reductions. Yield figure has been successfully reduced from 2.34 on clean wheat to 2.28.

The pulver-milled endosperm is unchanged in ash content and improved in color, say Sturtevant officials. Viscosity and absorption changes have proved beneficial to the bakery customers. The resultant product is narrow in predetermined micron range, due to self-classification in the impact mill. Until Sturtevant developed the self-classifying pulver-mill in 1959, the milling industry was wary of impact mills because of the high percentage of oversize.

The unit works the same as Sturtevant's standard pulver-mill. Material is fed into the unit, where special vanes draw air through the whirling mass. Three-row impactors—like rigid hammers on a hammer mill—crush the endosperm particles as they pass between and intermesh with regularly-spaced stationary wall impactors. Special deflectors force coarse materials back to the grinding area. A fan pulls the ground particles upward through pre-set selector arms which make the passage of the air-entrained product more or less difficult, thus determining the size and density of the fines desired.

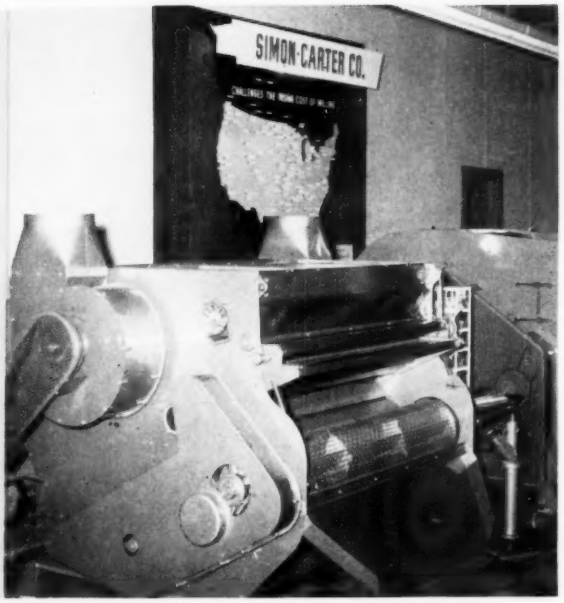
The pulver-mill is powered by its own 60-h.p. motor (of which Spangler uses approximately 40 h.p.), compared with the batteries of roller mills normally powered by one unit. It has only four bearings (two of the motor) as opposed to 14 on a double-stand roller mill (28 on the two mills it replaced). It requires no regular in-process adjustments as do roller mill rolls, and there is no leather belting to cause maintenance problems. «



LOOKING INTO THE Pulver-Mill at Spangler's Mount Joy mill shows three rows of impactors grinding endosperm particles as they pass between the revolving impactors and the stationary wall impactors visible at right. Deflector-wall construction bounces oversize back to grinding area. Selector blades near the top of unit determine size of particle to be collected. The Sturtevant Pulver-Mill produces a product which is 96% or better flour grade, compared with 70-75% possible with roller mills at this stage.

Where the Machines Used by Industry Come into Being

The Simon-Carter Co. of Minneapolis was the host . . . and the plant doors were opened wide for the millers.



THIS IS THE Simon-Carter showroom in Minneapolis viewed by AOM visitors. In the foreground is the firm's Scalperator. In the background is a map of major installations, remodelings, new construction and major reconstruction projects of the firm across the U.S.

By KEN. W. WAKERSHAUSER
Northwestern MILLER Managing Editor

MEMBERS OF THE Association of Operative Millers, and others, climaxed their 65th annual technical conference and trade show in Minneapolis with a look "behind the scenes" at the works of the Simon-Carter Co.

Directly following the final AOM session, representatives of the Simon-Carter firm held open house, putting on display for the millers its facilities where equipment is designed, developed, manufactured and displayed for 138 different styles, sizes and types of machines.

Since about 90% of each machine made by the firm is of sheet metal fabrication, visitors were shown the sheet metal department as the one most visibly demonstrating progression from a flat sheet of steel to a fabricated part.

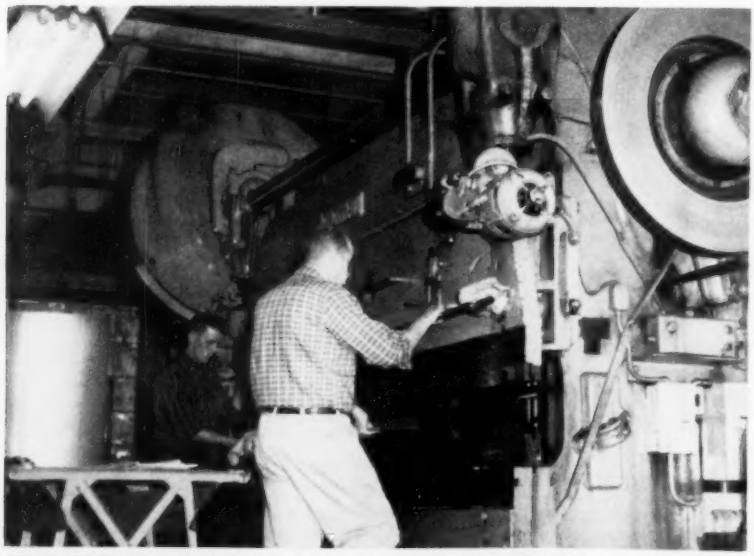
Starting with high-grade, cold-rolled steel (no black iron is used in any parts) Simon-Carter workmen cut to size, punch, notch, spotweld and perform related operations. After the first operation of shearing, it was pointed out, the company employs the first visible difference in manufacturing methods which it considers accountable—and necessary—for the high degree of efficiency in its operations and finished equipment.

This is the use of jigs, dies or templates which follow each operation accompanied by the shop order, providing a constant check on the work.

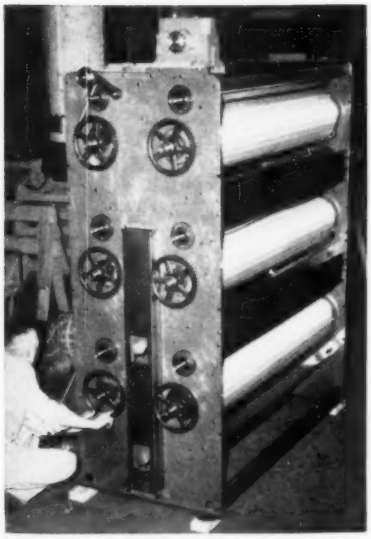
Sheared sheets are placed on a wheeled dolly and moved to layout tables, where the detail-layout specialist uses the accompanying template to mark precisely every punched hole, rolled edge, bent corner, or whatever complicated shape will be required for that particular part.

The templates are extra-thick, metal sheets, etched for permanent identification, with over-sized holes to locate every operation to be made in the fabrication. Templates are never destroyed—a constant program of design and improvement is in progress and, inevitably, certain sheet metal parts will become obsolete with newer models.

Because each model change is given a style and part number, which is etched on the template, replacement parts for Simon-Carter machines in use—but technically obsolete and out of production—can be furnished with



THIS FORMING PRESS is capable of exerting 250 tons of force. As pictured, it is forming door panels for Carter machines, one operation of the sheet metal shop through which visitors were escorted.



IN THE ASSEMBLY area, workmen put together a Carter precision grader.

replacement parts which are exact duplicates of the original.

Specialized Foundry

AOM visitors were shown the firm's small, precision foundry for grey-iron castings, which allows personnel to design any parts which require the weight, rigidity and solidity of castings but more economically produced than by sheet metal fabrication.

Here, the discs for length-separation grain cleaners (disc separators) were displayed as an excellent example of the specialized techniques developed over the last 40 years, and which are so complex, explained company officials, that no other foundries in the U.S. cast them. As one result, Simon-Carter's grey-iron specialists have been called upon to make the more delicate, complex castings of other firms in the Minneapolis and St. Paul area—companies which actually have foundries of their own.

The machine shop, like the other manufacturing departments, is not large in square-foot area, but provides a constant hum of activity from modern turret lathes, boring mills and radial drills, to name a few of the largest tools used. Jigs are used for all bolt-hole-location drilling — no hand layout measurements are permitted which might allow human error.

Moving to the parts department and assembly floor, millers accustomed to looking for coordination between departments of their own plants were able to see a model example of systemation. The 138-plus machines currently available from Simon-Carter require tens of thousands of parts "right now" on a rigid, fast-paced time schedule. Every part must be on hand when a machine is assembled.

To keep unit costs down, a three or four-month estimate must be prepared. So the production - management team determines from experience and anticipated sales volume how many machines of each style, type and model will be needed. Because 10 to 50 machines, each differently styled, may be sold in any given annual quarter, that number of complete sets of parts must be fabricated. Timing becomes essential. Purchasing must have the correct number of sheets of various thicknesses of steel in the sheet metal shop on a precise date; the foundry must deliver castings to the machine shop at a date to coincide with the work load there; parts must have storage space available at a specific date for fabrication.

It was illustrated as to what occurs if a part delivered to the assembly bay does not fit. Possibly a bolt hole was not punched or is out of position; maybe a bend is not precisely at the correct degree. Instead of the assemblyman running to the parts department for one that "might fit," he halts his work. He checks the part to make sure it is being inserted properly and does additional checking if necessary. The assemblyman may even call in the parts supervisor, who may summon someone from engineering if it becomes necessary.

Simon-Carter also operates a small, modern laboratory, where sizings, testings and other developmental work can be carried out in its own plant.

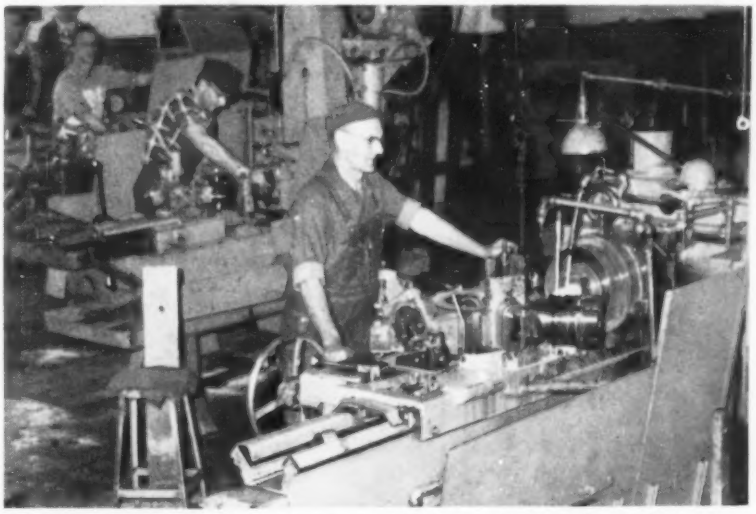
Known best for its flour milling and grain and seed processing equipment, the company dates its origin to the Minneapolis firm of Carter-Mayhew founded in 1919 for manufacture and sale of grain processing machinery.

SIMON-CARTER's foundry is pictured above. Chester Englund, foreman, displays a 25 in., V-5 disc pocket cast for the Carter Disc Separator.

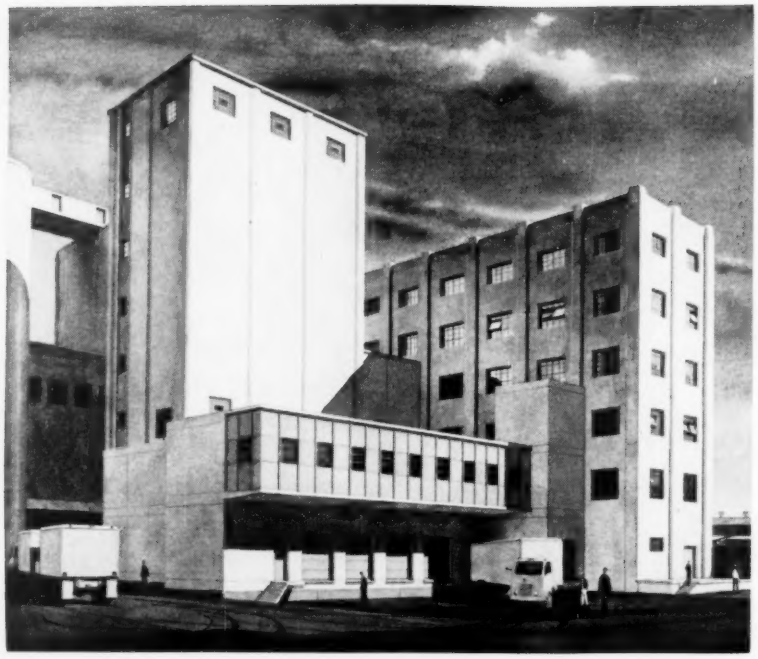
In 1928 Carter-Mayhew and the Hart Grain Weigher Co. of Illinois merged to form Hart-Carter Co. The Minneapolis and Canadian business was operated as the northern division of Hart-Carter Co., with Minneapolis specializing in manufacture of industrial machinery for flour milling and grain processing plants leaving the Winnipeg plant to manufacture both industrial and farm equipment.

Simon-Carter was formed in 1958 to take over the northern division business of Hart-Carter at Minneapolis and Winnipeg.

Corporate stock of the company is owned equally by the Hart-Carter Co. and Simon Engineering, Ltd. Simon-Carter is the U.S. distributor for the mill engineering firm of Henry Simon, Ltd., Cheadle Heath, England. «



IN THE FOREGROUND is a turret lathe doing shaft turning, a key operation of the machine shop shown to those who visited the plant.



THIS DRAWING depicts the Shawnee Milling Co. facilities as they will look when the four-level structure for storing and packing flour and corn meal is completed later this year.

Shawnee Milling Begins Work On Packing, Storage Building

Construction on a four-level building for storing and packing flour and corn meal has been started by the Shawnee (Okla.) Milling Co. The new building will measure 80 by 90 ft. with an over-all height of 130 ft.

"Upon completion of this addition, Shawnee Milling will have one of the most modern and complete milling and packing plants in the country," said Leslie A. Ford, president.

Thirty-one vertical storage bins will be constructed atop the second floor of the addition. These will be 35 by 50 ft. and give a total storage capacity of 27,000 cwt. of bulk flour and corn meal. The products will be conveyed pneumatically from the adjoining mill building into the bins.

The bins will be of double wall construction. Inner walls will be lined with copper tubing which will radiantly warm the interior walls and prevent condensation.

The basement will be used for storage of flour and corn meal bags. The entire area is to be equipped with humidifiers to assure proper humidity for the stored bags.

The first floor will serve as a warehousing and shipping dock. A five-bay truck platform will be included on this level.

Automatic Bagging

Automatic packers of the latest design will occupy the second floor, said Mr. Ford. These machines will automatically take bags from racks, open them with a blast of air, fill the bags and send them to an electronically-controlled trim scale for positive, and accurate weighing.

After the bags have been filled and the proper weights assured, they will be automatically settled, sealed and dated. Another automatic machine will correctly count and pack the bags in a baler. The bales will then be sealed and marked as ready for shipment.

Machines in the packing plant will be able to handle any size package from two pounds to 140-pound bags, with the products untouched by hands throughout the entire milling, packing and baling process, said Mr. Ford.

The Shawnee Milling plant has a present daily capacity of 5,400 cwt. flour and 1,400 cwt. of corn meal. The company also has a 350-ton daily capacity feed mill and total elevator storage of 2,500,000 bu.

Shawnee Milling operates another flour mill in northwestern Oklahoma, the Okeene Milling Co. This plant has a daily capacity of 2,400 cwt. of flour and elevator storage of 650,000 bu.

Jarvis Construction Co., Salina, Kansas, is the general contractor. It is expected that the building will be ready about Sept. 1. «

Thomas K. Warner Elected Comptroller Of Bemis Bro. Bag Co.

Thomas K. Warner, manager of the Stamford, Conn., offices of Price Waterhouse & Co., has been elected comptroller of Bemis Bro. Bag Co., it was announced by Judson Bemis, president. He is expected to join the company at its St. Louis headquarters offices on June 1.

Thomas Warner

Mr. Warner has been associated with the St. Louis, New York and Stamford offices of Price Waterhouse since 1939, following graduation with a B.S. degree in commerce from St. Louis University.

Mr. Warner is a member of the American Institute of Certified Public Accountants, National Association of Accountants and other professional organizations.

During World War II, he served as a deck officer with the U.S. Navy for three years.

At the present time, Mr. and Mrs. Warner reside in Darien, Conn., with their son and daughter.

Mr. Warner participates in alumni activities of St. Louis University and was vice chairman of the Alumni Fund Council in 1958. «

You give food and friendship with every $1 package you send to the world's hungry thru the CARE Food Crusade, New York

"Triple-Deck Purifiers give us lowest fragment count" *(says Superintendent of large milling firm)*

"Since we changed to BUHLER *Triple-Deck* PURIFIERS in one of our mills, its flour has fewer insect fragments than that from any of our other plants," says the superintendent of one of North America's largest milling firms.

Yes . . . and there's a good reason, because lighter particles are stratified on the top sieve where they are carried away by air or tailed over. Thus, the two lower sieves have clean products.

And here are just a few of the *other* important advantages you get when you switch to BUHLER *Triple-Deck* PURIFIERS.

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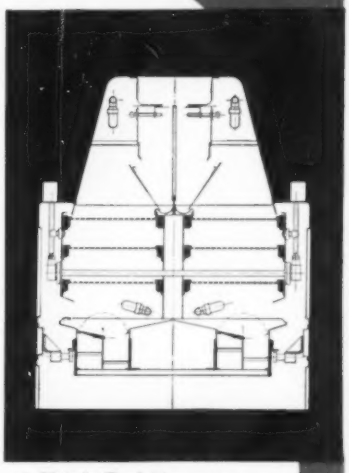

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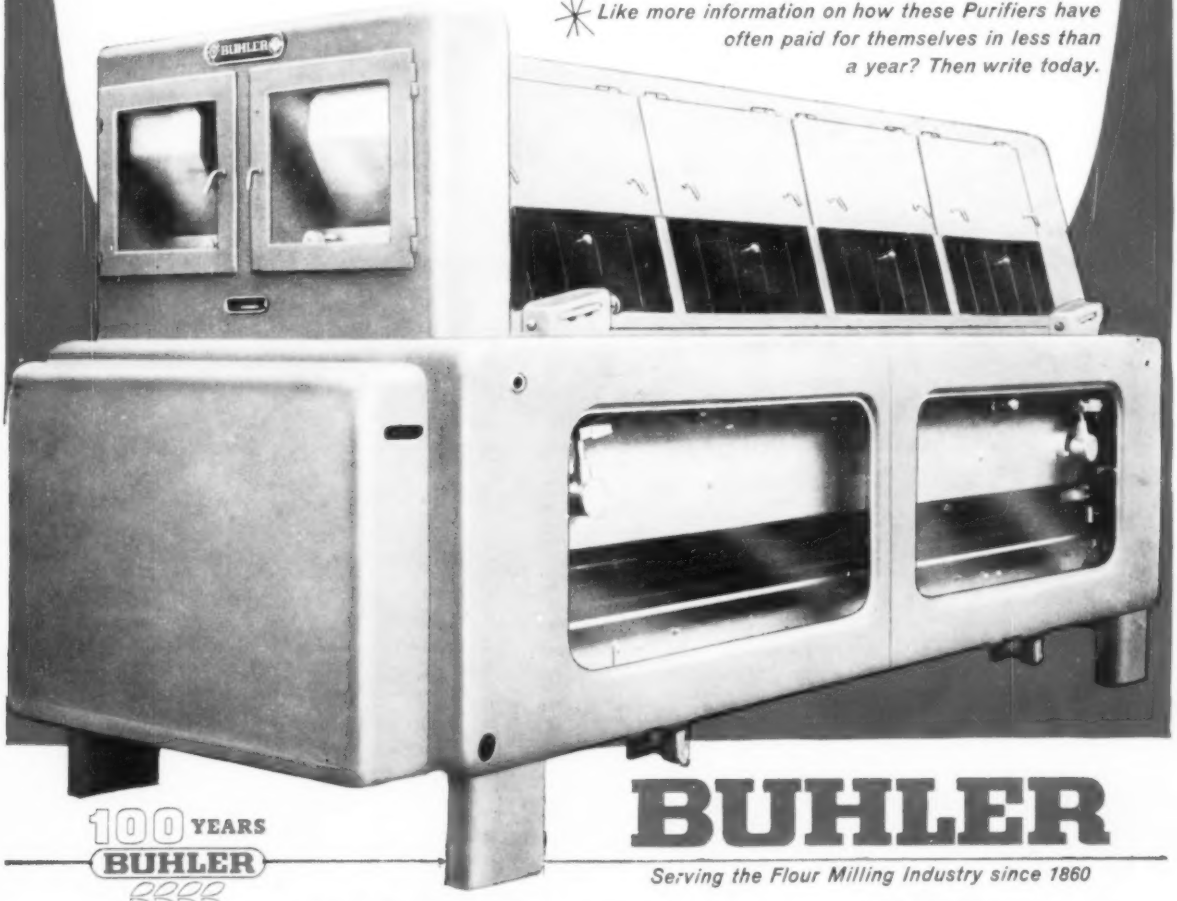

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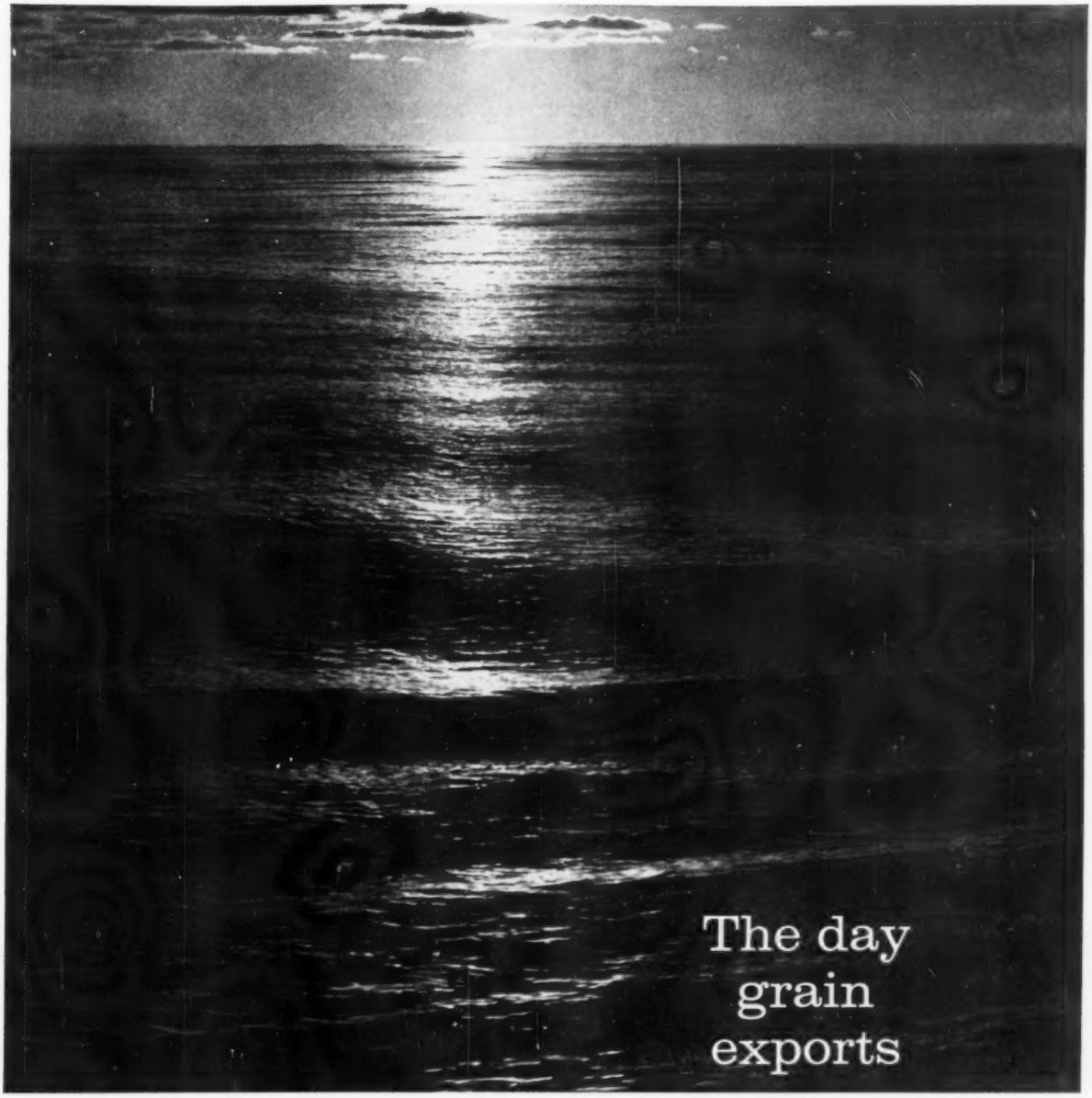

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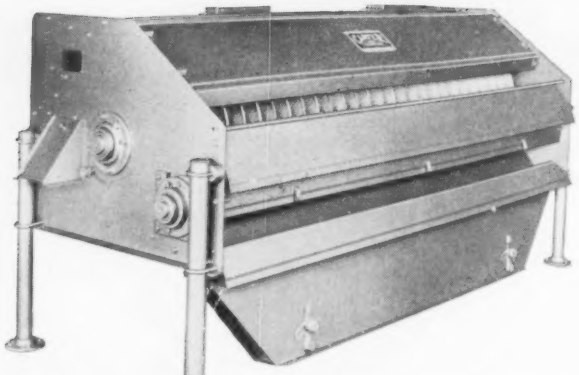

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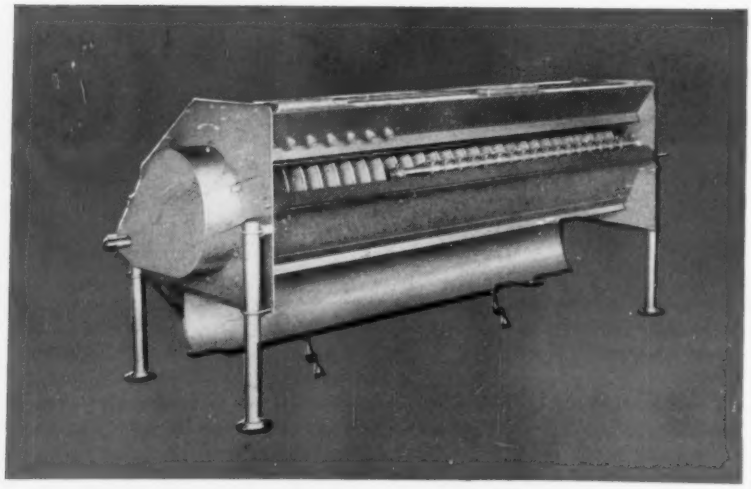

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AIB Installs Unit To Assist in Bread Research Projects

A freeze-dryer unit, scaled for pilot plants and similar to those used in the production of antibiotics, is now being used in basic research projects at the American Institute of Baking in Chicago. The projects are isolation of the constituents in bread flavor, and determination of the functional properties of bread-making components, supported by funds from the Max C. Fleischmann Foundation and the Baking Research Foundation.

The new unit will freeze up to five gallons of liquid, operate at a temperature as low as -75°F., and apply a vacuum to remove water from frozen material.

Because drying is done while the material is frozen, there is no heat damage to sensitive biological material.

Dr. Lazare Wiseblatt, research chemist in charge of the flavor project, will use the freeze-dryer to extract from fermented brews certain materials involved in bread flavor. Karel Kulp, chemist, will freeze-dry fractionated samples of flour solubles, tailing starches and gluten to test, in an unmodified state, their effects on baking quality. Mr. Kulp is now conducting AIB's fundamental study of the bread-making process. «

KAREL KULP, standing, and Dr. Lazare Wiseblatt complete a test run of the new freeze-dryer apparatus installed recently in the laboratories of the American Institute of Baking.

L. J. Brenneis Named To Head Cincinnati Section of AACC

Lester J. Brenneis, Harris Milling Co., Owosso, Mich., has been elected as chairman to head the Cincinnati Section, American Association of Cereal Chemists, for the coming year. As other officers, the section elected at its recent meeting Don K. Dubois, Hercules Powder Co., Harbor Beach, Mich., as vice chairman and Thomas H. McCormack, Kroger Food Foundation, Cincinnati, as secretary-treasurer.

Mr. Brenneis replaces Harry J. Loving, Mennel Milling Co., Fostoria, Ohio, now retired as head of the section.

Meeting for its final session of the season at Columbus, Ohio, the group was addressed by two members of the Battelle Memorial Institute. Dr. John Litchfield spoke on "Food Uses for Micro-Organisms" and Dr. Carl Cohen on the cancer chemical therapy screening program at Battelle.

Papers Presented

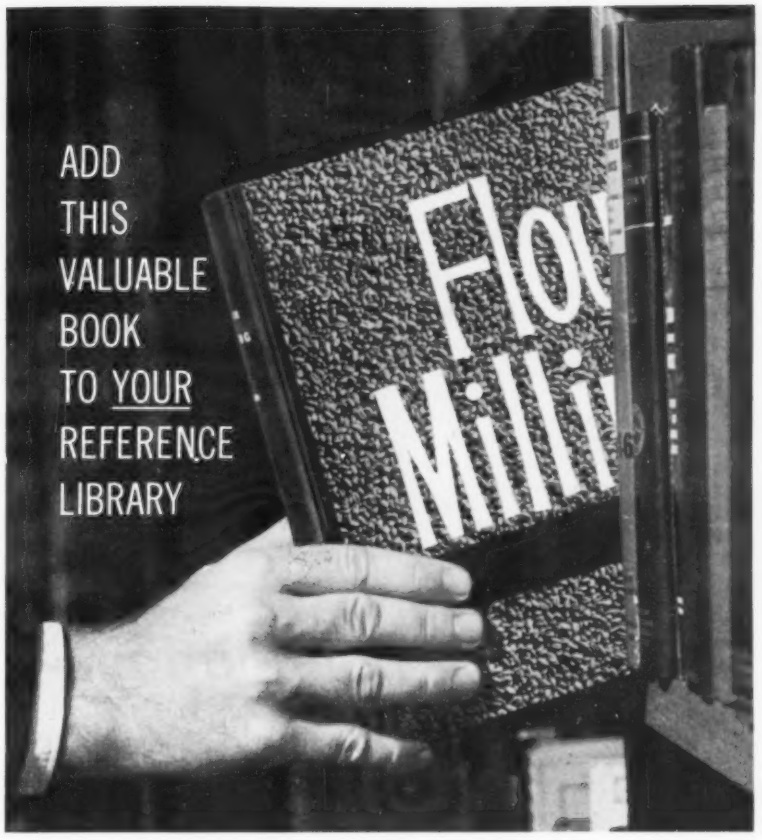
Mr. Dubois of Hercules Powder presented a paper on the use of wheat starch in bakery products. His paper was accompanied by slides showing the substitution of wheat starch for some portions of flour.

The outgoing chairman, Mr. Loving of Mennel Milling, presented a paper, "Trends in Milling and Distribution of Bulk Flour." He pointed out that, in his opinion, bulk loading has not reduced the need for help in the mills. However, he cited that the cost of bulk loading tanks, air loaders and other equipment can be paid off in two and one-half to three years of operation, and that he has found very few damaged shipments with bulk flour handling. Mr. Loving also covered some aspects of low moisture flour (12% or less) and the subject of air classification.

The section moved to meet jointly with Districts 3 and 5, the Association of Operative Millers, in Danville, Ill., Oct. 20 and 21. Members also decided to invite AACC to hold its 1968 national meeting in Cincinnati. «

GRAIN FIRM FORMED

S. & S. Grain, Inc., has been incorporated in Crawford County, Kansas, to operate a grain elevator business. James H. DeCloursey, Jr., Kansas City, has been named resident agent. Capitalization of $10,000 has been authorized. «



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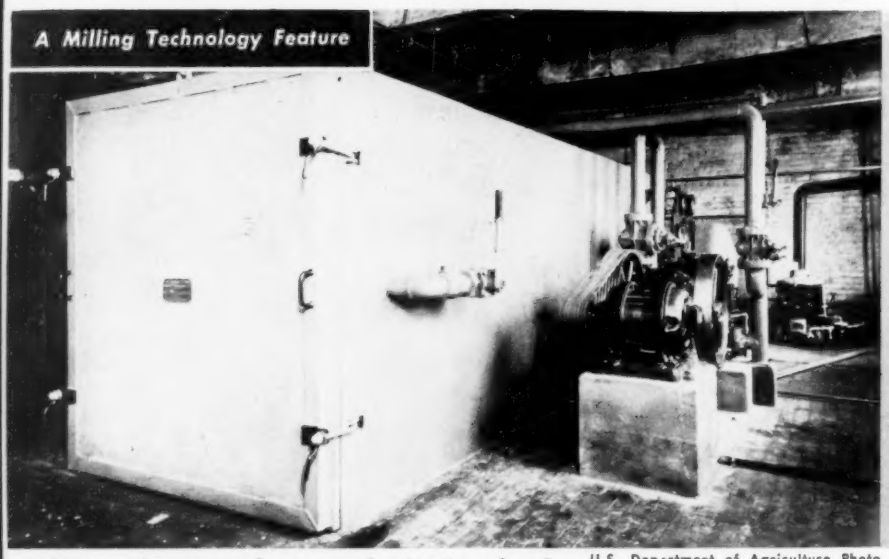


Rectangular type of vacuum fumigation chamber U.S. Department of Agriculture Photo

How effective is vacuum fumigation for killing insects? It's an intriguing subject, one on which Dr. Cotton has done considerable work. Actually, the idea was conceived nearly 300 years ago—and it has since undergone periodic development.

Vacuum Fumigation

By RICHARD T. COTTON

BECAUSE MANY PRODUCTS used in the preparation of specialty foods come from outside sources, the possibility of insect infestation remains a problem—and a source of contamination within the plant.

Vacuum fumigation, or placing of the commodity to be fumigated in a gas-tight steel chamber where the air is removed and a lethal gas introduced, is rapid, highly effective and relatively safe in some instances.

It provides a more rapid penetration of commodities by the fumigant than in atmospheric fumigation, and insects can be reached and killed with a rapidity not possible in an atmospheric vault.

Robert Boyle conceived the idea of killing insects by depriving them of air back in 1670. He invented a mechanical air pump to exhaust a large proportion of the air from small receptacles, and he studied the effects of vacuum upon various forms of animal life. His vacuum was by no means perfect. However, it proved effective in killing many forms of animal life with which he experimented.

Actually, the first mechanical air pump is said to have beeen invented by Otto Von Guericke in 1654. He experimented with birds and fish, but not with insects.

Back and Cotton (1925) investigated the possible use of high vacuum alone for commercial control of insects in various stored commodities, but found that the vacuum obtainable commercially—while effective in killing the adults of many of the common stored product insects—did not kill the larval and egg forms rapidly enough to compete with other methods of insect control.

There has been considerable speculation as to whether or not the act of reducing pressure in the process of vacuum fumigation may directly affect the insect so as to increase its susceptibility to fumigants. However, experimental work by Cotton et al. (1937) conclusively showed that low pressure did not rupture the insect eggs as claimed by some writers, nor did it render the other insect stages more susceptible. Reduced pressure does facilitate the penetration of the fumigant into the center of the load, and by reducing oxygen content of the fumigatorium increases efficiency of the fumigant.

Equipment Available

Vacuum fumigation tanks are obtainable in rectangular or cylindrical form. The tanks first used were cylindrical in shape, because it was believed this type would withstand the change in pressure with less chance of collapsing. For convenience in loading and unloading and for utilizing a larger percentage of the space, rectangular tanks are usually preferred. They are made in all sizes, from laboratory outfits with a capacity of about one cubic foot up to those capable of holding one or more freight cars. The size of the chamber chosen will depend upon type and amount of the commodity to be fumigated and the amount of space available for it in the mill or factory. Some firms prefer to have two tanks or more that can be operated with one set of equipment. While one tank is under fumigation the next can be loaded or unloaded and the fumigation crew kept continuously busy. It is not economical to use a tank larger in size than will meet current needs, because of the larger quantity of fumigant required to operate a large tank.

Vacuum tanks usually are installed so that small trucks or factory skids on narrow gauge tracks can be run right into them. If the tank is equipped with a door at each end, trucks can be run in at one end and out the other, so that fumigated products will not be in the way of the next load. In some establishments one end of the tank opens into the receiving room and the other into the general storage warehouse. In this way raw materials, likely to be infested, can be fumigated before they are allowed into the main plant.

Doors of the tanks should be so balanced and hung that they can be easily and quickly opened and closed by one man. The gaskets should be durable and at the same time provide a gas-tight seal. Efficiency of a tank depends to a large extent upon tightness with which the door—or doors—fit. A properly built tank should hold a vacuum without material increase in pressure during the entire exposure period.

Each installation will require a vacuum pump capable of pulling a 28-in. vacuum in 10 min. or less. Use

of a vaporizer in connection with a vacuum tank adds considerably to its efficiency, because it insures entrance of the fumigant into the tank in a gaseous state. A heated vaporizer with a hot water or steam jacket can be used.

In rectangular tanks it is desirable to install multiple gas inlets along the four longitudinal angles of the tank. A by-pass from the exhaust to the multiple gas inlet system with suitable valves will provide a means of circulating the gas in the tank by means of the vacuum pump. By the use of multiple inlets Cotton et al. (1937) showed that a better distribution of the gas could be obtained, and that by circulating fumigant for 15 min. after introduction the dosage could be materially reduced.

Many tanks formerly were equipped with steam coils or electric heating units to maintain a favorable temperature during fumigation. Such equipment is of little value, because it is impossible to raise temperature of the load in the tank fast enough to be of practical use. The fumigant, when introduced, quickly assumes that of the commodity in the tank.

Fumigation Techniques

The commodity to be fumigated is first loaded into the vacuum chamber, the door—or doors—tightly closed, and pressure reduced to 2 in. absolute. In terms of vacuum this is equivalent to 28 in., corrected reading. Fumigant is then admitted through the vaporizer to the vacuum chamber without addition of air, resulting pressure being held without change for duration of the fumigation. This method has been referred to by some writers as the "sustained-vacuum method," suggested by the writer in 1932 after he found that insects were much more susceptible to fumigants if oxygen content of the fumigation chamber was reduced from the normal 20% to 2% or less and maintained at that level throughout the exposure period. If the tank is equipped for circulating the fumigant it is advisable to recirculate while the fumigant is introduced and to continue recirculation 15 min.

Vacuum Broken Down

Formerly, it was common practice to break down the vacuum with air after fumigant was introduced, with the mistaken idea that inrushing air would carry fumigant into the load. In France and French overseas territories it is customary to introduce air and fumigant simultaneously until the pressure rises to a little below atmospheric pressure.

Neither method is as effective as the "sustained vacuum method." More efficient penetration obtained with this latter method is explainable by the fact that the rate of diffusion of a gas through air is inversely proportional to the absolute pressure. In other words, the lower the pressure in the tank the faster the fumigant will diffuse and penetrate through the commodity.

In actual practice it is advantageous to draw as high an initial vacuum as possible with the equipment available, with regard to the cost of power. A perfect vacuum would be 30 in., corrected reading. However, this cannot be attained with the ordinary commercial pump, and fortunately is not required. Most vacuum tanks are equipped with a spring gauge and a mercury column for measuring pressure or the vacuum drawn. The number of inches of mercury drawn up in the gauge by the vacuum created in the tank represents the vacuum obtained. The value of this reading is not constant from day to day, or in different localities, because it is really a reading of the relative pressure in the tank at that time and place.

The atmospheric pressure differs in different localities according to the height above sea level. The atmospheric pressure may also differ from day to day in all localities. The reading can be corrected by obtaining actual atmospheric pressure for the locality at the time of fumigation from the local weather bureau. By adding to or subtracting from the reading on the gauge of the tank, the difference between the existing atmospheric pressure and the theoretical 30 in. is determined.

For uniformity, it is better to refer to pressure in the tank in terms of absolute pressure instead of inches of vacuum. An actual 28 in. of vacuum, for example, would represent two inches of absolute pressure. If the atmospheric pressure in a given locality on a given day was 29.5 it would therefore be necessary to draw only a vacuum of 27.5 in. on the gauge to have an absolute pressure of two inches.

Some tanks are equipped with gauges that record the absolute pressure. However, accurate gauges are expensive and are not essential for most commercial work.

Exposure Period

At conclusion of the exposure period, free gas in the tank can be pumped out by drawing as high a vacuum as possible and then breaking the vacuum with air. This so-called "air washing" can be repeated by alternately drawing and breaking a vacuum. However, it will not remove all fumigant since a considerable portion of the original dosage may be absorbed and held by the commodity in the tank. This absorbed fumigant will exert a further insecticidal action after the commodity is removed from the tank, a phenomenon known as "post fumigation."

When highly toxic gasses are used, fumigant slowly released from the fumigated commodities may be a source of danger or discomfort to workmen, unless adequate ventilation is provided in the storage warehouse where commodities are placed after treatment. In some cases it is advisable to provide auxiliary ventilation for the tank during unloading to protect workmen from exposure to high concentrations of fumigant that may still be present.

English scientists (Burns Brown and Heuser, 1953) found that if the vacuum is broken with air sometime before the end of the exposure period, a sudden large rise in concentration of the fumigant occurs at the center of the load. This is caused by contraction of the air-fumigant mixture within the load. Operators may

Suggested Dosages of Fumigants per 1,000 Cu. Ft. of Space for Use in Vacuum Chambers—Exposure Period 3 Hours—Temperature 75° F. or Above*

Commodity—	Fumigant and Dosage		
	HCN ounces	Methyl Bromide ounces	Ethylene Oxide-CO_2 (1-9 mix) pounds
Milled cereals	32	64	10 (per ton)
Cocoa beans	32	32	
Nut meats or in shell	40	32	35-40
Dried fruits in permeable cartons		40	40
Bagged rice	38	32	22.5

*These dosages will vary with the temperature and the length of exposure. Dosages should be increased with shorter exposure periods or lower temperatures. Dosages can be lowered if the exposure periods are extended.

find it useful in some cases to adopt this procedure.

Most fumigants recommended for use in atmospheric vaults can also be used in vacuum tanks, although more toxic gases such as hydrocyanic acid, methyl bromide, mixtures of ethylene oxide and carbon dioxide, or mixtures of acrylonitrile and carbon tetrachloride, are ordinarily employed. Methyl bromide is probably more universally used at present than any other fumigant.

Selection of a fumigant will depend upon the individual user and the commodity to be treated. Information regarding dosages generally is not available for all commodities and all fumigants, and in many cases must be determined by experience. Dosages required will not be less than those used in atmospheric vaults for 24-hr. exposures and may be considerably higher to compensate for the shorter exposures of one to four hours.

Dosage Varies

The dosage will vary with the fumigant used, length of the exposure, type and quantity of the commodity to be treated, and temperature of the commodity. To insure satisfactory results, all of these factors must be taken into consideration. It has been determined that the sorption of fumigants differs both with the fumigant and the commodity, but is in proportion to the quantity of the commodity treated.

It is, therefore, more economical to calculate dosage on the basis of the load rather than cubic content of the tank, if the tank is half full or more. However, if desirable, the dosage can be computed according to cubic content of the tank on the basis of a full load. Dosages for a few commodities and fumigants are suggested in the table on page 25.

Measuring the Dosage

Measuring the dosage may be accomplished by weighing it into the tank or vaporizer, by measuring it volumetrically, or by dropping the vacuum a given number of inches with the fumigant. The first two methods are accurate. The third cannot be used indiscriminately, since with a given quantity of gas the drop in vacuum will vary both with the quantity and type of commodity being fumigated in the tank. However, it is a convenient method for commercial use, and by making proper allowance for differences in temperature and in type and quantity of load in the tank, the dosage can be measured in this way with sufficient accuracy for ordinary use.

Literature Cited

1. Back, E. A., and Cotton, R. T.—The use of vacuum for insect control; Journ. Agr. Research xxxl (11):1035-1041, 1925.

2. Boyle, Robert—New pneumatical experiments about respiration; Phil. Trans. Roy. Soc., London, 5 (62):2011-2031, (63):2035-2056.1670.

3. Burns Brown, W., and Heuser, S. G.—Behavior of fumigants during vacuum fumigation. I. Penetration of methyl bromide into boxes of dates; Jr. Sci. Food Agric., 4:48, 1953.

4. Cotton, R. T.—The relation of respiratory metabolism of insects to their susceptibility to fumigants; Journ. Econ. Ent., 25(5):1103; 1932.

5. Cotton, R. T., Wagner, G. B., and Young, H. D.—Oxygen as a factor in vacuum fumigation; Journ. Econ. Ent., 30(3):560; 1937.

6. Cotton, R. T., Wagner, G. B., and Young, H. D.—Recent advances in the vacuum fumigation of cereal products with certain fumigants; U.S.D.A. Bur. Ent. & Plant Quarantine, Bull. E-405; 1937; Mimeograph.

Dr. R. A. Morck To Head New York Section of AACC

The New York Section, American Association of Cereal Chemists, closed its final meeting of the season by electing Dr. Roland A. Morck, National Biscuit Co., to head up its activities for next year as chairman.

As vice chairman, the section elected John T. Buckheit, Standard Brands, Inc., and as secretary Stanley A. Bobrowski, Jr., Anheuser-Busch, Inc.

George T. Carlin, associate director of research, Swift & Co., addressed the New York group on the subject of eggs in baked products. He discussed the properties and uses of eggs in both frozen and dried form for the production of cakes, doughnuts and prepared mixes.

Mr. Carlin outlined the physical and chemical composition of eggs and some of the variations which may occur in the freezing and drying processes. In Mr. Carlin's opinion, there appears to be a definite need for establishment of a basic nomenclature and a set of standards of frozen and dried egg products. «

C. R. Myers Elected To Head GPMMA

Members of the Grain Processing Machinery Manufacturers Assn., meeting in Chicago for their 11th annual session, elected C. Robert Myers, Myers-Sherman Co. of Streator, Ill., as president.

As vice president, the association elected Richard L. Crom, general manager, farm equipment division, Butler Manufacturing Co., Kansas City. New directors elected for three-year terms were Mr. Crom and Oak Smith, Wenger Mixer Manufacturing, Sabetha, Kansas. Vernon Hayes, Hayes & Stolz Industrial Manufacturing Co., Fort Worth, was elected a director for one year to fill out a vacated term.

Holdover directors are Irl A. Daffin, Daffin Corp., Lancaster, Pa.; Robert Merwin, Eriez Manufacturing Co., Erie, Pa.; Mr. Myers, and Ralph E. Williams, B. F. Gump Co., Chicago. John H. Wessman, Kansas City, was renamed secretary-treasurer.

A new purchasing guide of feed mill machinery and equipment, compiled by the association, was announced at the annual meeting. The guide will be available to purchasing departments of flour milling and feed manufacturing firms through wide distribution by various national and regional associations. «

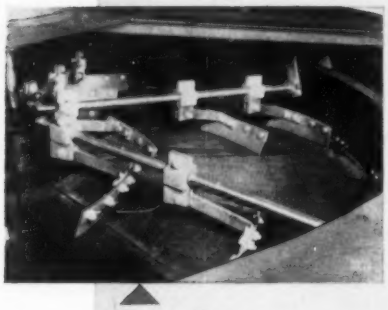
"HMMM, WHICH IS THE LONGEST?" inquires Gene Packwood, manager of the country station division of Dannen Mills, Inc. Mr. Packwood is examining beards grown by Joseph Warta, Turon, Kansas, second from left, and Donald Thomas, Almota, Kansas, for the state centennial being observed this year. Next to Mr. Thomas is William Brown, McClain, and Roy Sneed, Chanute, Kansas. The picture was taken during the spring meeting of Dannen's country station managers.

MIAG RECLAIM SYSTEMS FOR SOLIDS FROM GRAIN WASHER WATER

Combination Reclaim Sieve and Twin Screw Press with Motor Drives*

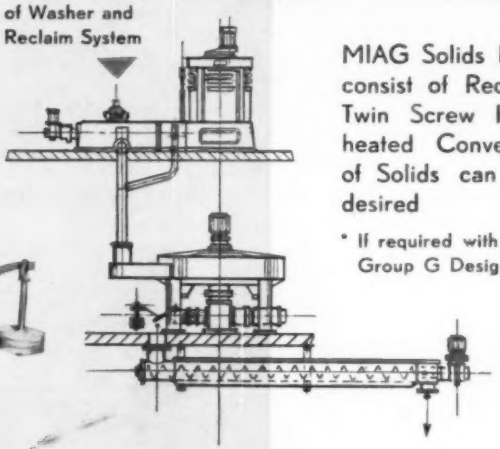
increase your Screenings Recovery by reclaiming valuable Feed separated in the Washing Process

Reclaim Sieve with Motor Drive*



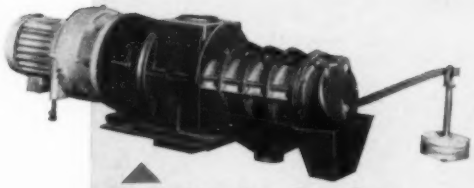
Reclaim Sieve with Scrapers moving Solids to Screw Press

Arrangement of Washer and Reclaim System



MIAG Solids Reclaim Systems consist of Reclaim Sieve and Twin Screw Press. A steam heated Conveyor for drying of Solids can be supplied if desired

* If required with Motors of Class 2 Group G Design



Motor driven Twin Screw Press reduces Moisture Content of recovered Solids

MIAG

Proven in many Installations for almost 50 Years

BRAUNSCHWEIG / Western Germany

Agents for

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MIAG NORTHAMERICA INC.
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Canada
THE TRIMONT CORPORATION, LTD.
SUITE 29, 1390 SHERBROOKE ST. W. MONTREAL, P. Q.

WHERE THEY ARE MEETING

June

June 1—Kentucky Millers Assn., annual outing; Campbell House, Lexington, Ky.; sec., Charles B. Long, Shelbyville, Ky.

June 4-6—New York State Association of Manufacturing Retail Bakers, annual convention; Westchester Town House, Yonkers, N.Y.; sec., Frank E. Englert, 135 Primrose Drive, New Hyde Park, N.Y.

June 4-6—The National Council of the Baking Industry, annual conference; Royal York Hotel, Toronto, Ont., Canada; managing director, R. H. Ackert, 4 N. Sherbourne St., Suite 105, Toronto 5, Ont., Canada.

June 10-12—Bakers Association of the Carolinas, annual convention; Ocean Forest Hotel, Myrtle Beach, South Carolina; sec., Mary E. Stanley, P.O. Box 175, Rockingham, S.C.

June 13 — Connecticut Bakers Assn., summer meeting; Banner Lodge, Moodus, Conn.; sec., Charles Barr, 584 Campbell Ave., West Haven, Conn.

June 19—Ontario Flour Millers Assn., annual general meeting; The King Edward Sheraton Hotel, Toronto, Ont., Canada; sec.-mgr., Harry J. Dowsett, Room 205, 29 Colborne St., Toronto 1, Ont., Canada.

June 23-24—District 10, Association of Operative Millers; San Luis Obispo, Cal.; sec., Gene Thomas, California Mill Equipment Co., San Mateo, Cal.

June 25-27—New Hampshire-Vermont Bakers Assn., annual meeting; Wentworth Hall, Jackson, N.H.; sec., Calvin Gaebel, 214 Harvard St., Boston 34, Mass.

July

July 13-17—Bakery Equipment Manufacturers Assn., annual meeting; Bedford Springs Hotel, Bedford Springs, Pa.; sec., Raymond J. Walter, 511 Fifth Ave., New York 17, N.Y.

July 16-19—West Virginia Bakers Assn., 1961 convention; the Greenbrier Hotel, White Sulphur Springs, W.Va.; sec., Mrs. Edward R. Johnson, 611 Pennsylvania Ave., Charleston 2, W.Va.

September

Sept. 8—District 4, Association of Operative Millers; Minneapolis, Minn.; sec., W. R. Carter, R. J. S. Carter Co., 1219 Flour Exchange, Minneapolis 1, Minn.

Sept. 8-9—District 7, Association of Operative Millers; Lake Murray Lodge, Ardmore, Okla.; sec., Henry H. Stark, Ross Machine & Mill Supply Co., Oklahoma City.

Sept. 15-16—District 2, Association of Operative Millers; Aladdin Hotel, Kansas City, Mo.; sec., George Smutny, Entoleter, Inc., Kansas City.

Sept. 17-18—Wisconsin Bakers Assn., annual convention; Plankinton House, Milwaukee, Wis.; sec., Fred H. Laufenburg, 6173 Plankinton Bldg., 161 W. Wisconsin Ave., Milwaukee 3.

Sept. 17-19—Southern Bakers Assn., annual production conference; Dinkler Plaza Hotel, Atlanta, Ga.; sec., Benson L. Skelton, Henry Grady Bldg., 26 Cain St., N.W., Atlanta 3, Ga.

Sept. 23-25—Southwest Bakers Assn., annual convention; Hilton Inn., El Paso, Texas; sec., Ralph Kilgore, P.O. Box 127, Albuquerque, N.M.

Sept. 23-26—New Jersey Bakers Board of Trade, anniversary convention and exhibition; Essex House Hotel, Newark, N.J.; sec., Michael Herzog, 48 Clermont Ave., New Brunswick, N.J.

Sept. 24-26—Kentucky Master Bakers Assn., annual convention; Sheraton Gibson Hotel, Cincinnati, Ohio; sec., Al Wohlleb, 743 Loretto St., Louisville 11.

Sept. 29-30—District 9, Association of Operative Millers; Davenport Hotel, Spokane, Wash.; sec., Richard Schmidt, Centennial Mills, Inc., Spokane.

October

Oct. 4-7—National Bakery Suppliers Assn., annual meeting; Hotel Shelburne, Atlantic City, N.J.; sec., William Effron, Effron Bakery Supply Co., Poughkeepsie, N.Y.

Oct. 7-12—1961 Baking Industry Exposition; Convention Hall, Atlantic City, N.J.; sec.-treas., Harold Fiedler, 20 N. Wacker Drive, Chicago 6, Ill.

Oct. 13-14—District 6, Association of Operative Millers; Lowell, Mich.; sec., Oscar J. Nelson, King Milling Co., Lowell, Mich.

Oct. 20-21—District 3, Association of Operative Millers; Danville, Ill.; sec., Hollis Maun, Jr., M.M.C. Sales Corp., Dover, Ohio.

Oct. 21-22—Nebraska Bakers Assn., annual convention; Sheraton Fontenelle Hotel, Omaha, Neb.; sec., L. F. O'Konski, Jr., 1806 Chicago St., Omaha.

Oct. 27-28—District 11, Association of Operative Millers; Barringer Hotel, Charlotte, N.C.; sec., James N. Campbell, Sterwin Chemicals Inc., Charlotte, N.C.

November

Nov. 13-14—Washington Association of Wheat Growers, annual convention; Walla Walla, Washington; sec., Geo. W. Johnson, Ritzville, Wash.

Nov. 13-14—New England Bakers Assn., fall convention; Sheraton-Plaza Hotel, Boston, Mass.; sec., William E. Bowman, 945 Great Plain Ave., Room 9, Needham 92, Mass.

Nov. 17-18—District 12, Association of Operative Millers; Newhouse Hotel, Salt Lake City, Utah; sec., Joseph J. Keiser, Salt Lake City Flour Mills, Salt Lake City.

December

Dec. 9—District 2, Association of Operative Millers; Aladdin Hotel, Kansas City, Mo.; sec., George Smutny, Entoleter, Inc., Kansas City.

CALENDAR FOR 1961-62

JUNE

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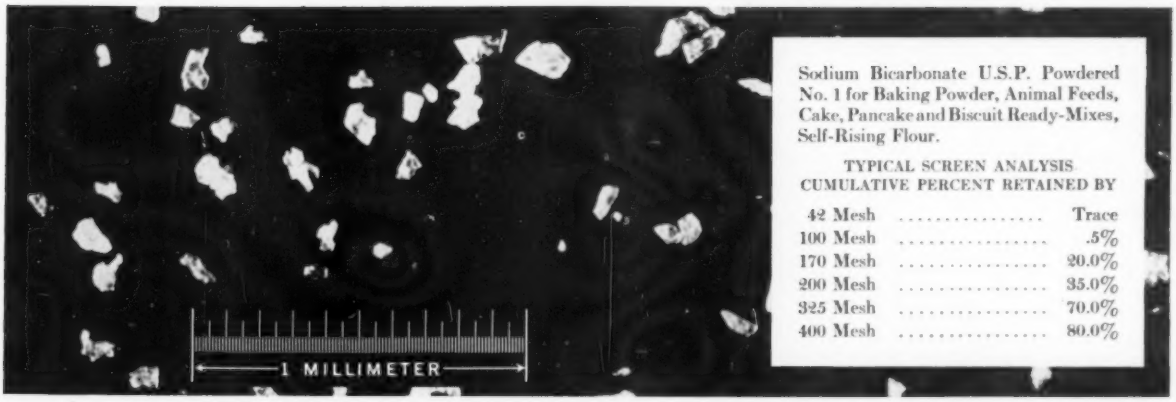
Get Sodium Bicarbonate in the grain size you need every time...

FROM CHURCH & DWIGHT



Sodium Bicarbonate U.S.P. Powdered No. 1 for Baking Powder, Animal Feeds, Cake, Pancake and Biscuit Ready-Mixes, Self-Rising Flour.

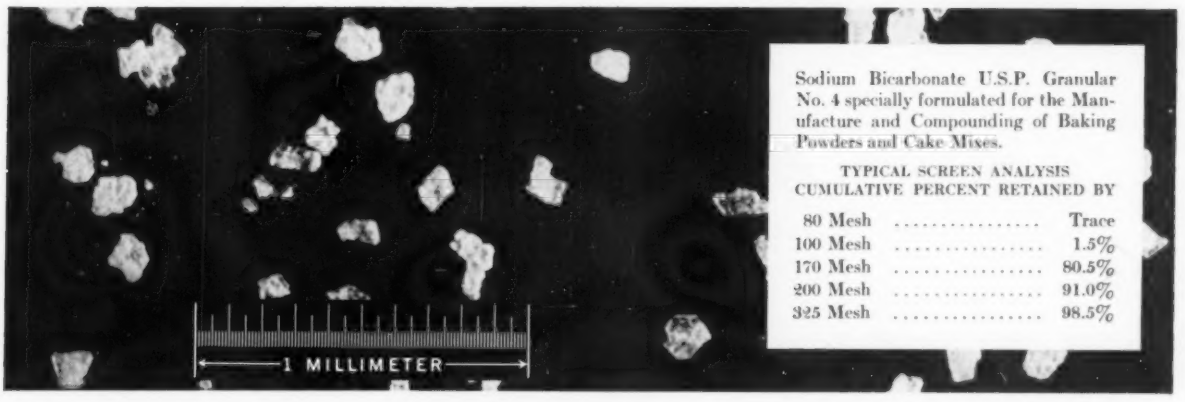
TYPICAL SCREEN ANALYSIS
CUMULATIVE PERCENT RETAINED BY

42 Mesh	Trace
100 Mesh	.5%
170 Mesh	20.0%
200 Mesh	35.0%
325 Mesh	70.0%
400 Mesh	80.0%

Sodium Bicarbonate Treated Free-Flowing (U.S.P. Powdered No. 1 blended with approximately .4% Tri-calcium Phosphate) for Self-Rising Flours and Cake Mixes.

TYPICAL SCREEN ANALYSIS
CUMULATIVE PERCENT RETAINED BY

42 Mesh	Trace
100 Mesh	.5%
170 Mesh	20.0%
200 Mesh	35.0%
325 Mesh	70.0%
400 Mesh	80.0%



Sodium Bicarbonate U.S.P. Granular No. 4 specially formulated for the Manufacture and Compounding of Baking Powders and Cake Mixes.

TYPICAL SCREEN ANALYSIS
CUMULATIVE PERCENT RETAINED BY

80 Mesh	Trace
100 Mesh	1.5%
170 Mesh	80.5%
200 Mesh	91.0%
325 Mesh	98.5%

Don't jeopardize the shelf life or performance of your Baking Powder, Self-Rising Flour or Cake Mix with an inappropriate granulation of Sodium Bicarbonate. Insist on Church & Dwight. You'll get the widest selection of grain sizes because Church & Dwight is the country's largest supplier of Sodium Bicarbonate U.S.P. You'll also get unmatched technical service based on more than 100 years of experience in formulating Sodium Bicarbonate. Unusual grain size requirements given special attention. Try us and see. For technical data on all grades of Sodium Bicarbonate, send for brochure, "Church & Dwight Sodium Bicarbonate—How It Serves Industry Today."

CHURCH & DWIGHT CO., INC., 70 PINE STREET, NEW YORK 5, N.Y.

Buhler Firm Puts Another New Flour Mill Into Operation

ONE FEATURE of the new Showa Sangyo flour mill now in full operation at Tsurumi, Japan, are the pneumatic separators and locks pictured above.

THE SEVENTH, AND most recent, flour mill built in Japan by Buhler Bros., the Swiss engineering firm, is now in full-scale production for the Showa Sangyo Milling Co., Ltd., at Tsurumi, a city between Tokyo and Yokohama, located in one of the largest industrial regions of the country.

Adding its output of flour to that of mills established earlier to supply the Far East, it produces 2,000 cwt. of flour in 24 hours of working, or 120 metric tons of wheat, from a fully pneumatic mill.

Facilities include a cleaning section, settling bins and flour storage area.

Buhler also has engineered and erected mills in Shimizu and Yokohama and two each in Kobe and Tokyo.

In the latest mill, at Tsurumi, patented multiple outlets in the cleaning section are used for the uniform descent of wheat from raw material bins. The wheat then passes through measuring and mixing apparatus, with conveying of products in the cleaning house accomplished by pressure pneumatic conveyors.

Buhler has installed a washer of its own design to insure total removal of stones and to provide intensive wet cleaning. The engineering firm's hot air drying and conditioning columns, it is claimed, have resulted in considerable improvement in the preparation and suitability of wheat for grinding. Scouring machines and separators have been provided for dry cleaning. Waste from the cleaning department is first sifted in a small sifter, with tailings then passing to a hammer mill for reduction.

Grinding Operation

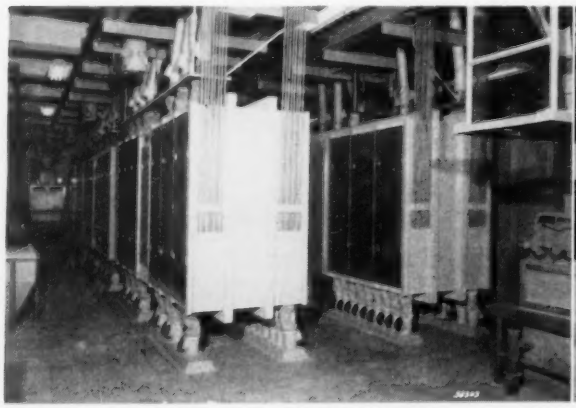
A four-floor layout has been used in the Showa Sangyo mill for convenience and efficiency. The four-roller mills are equipped for pneumatic engaging and disengaging of the rolls. Roller bearings, to conserve power, are also used, along with water cooling and speed regulators. The mill's middlings purifiers have three layers of sieves.

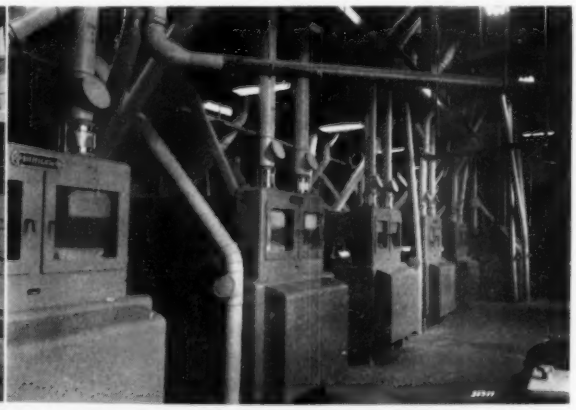
Sifters and the entire filter plant are arranged on the third floor of the Showa Sangyo mill. Groups of separators and locks, as well as the detachers, are on the top floor.

Flour Warehouse

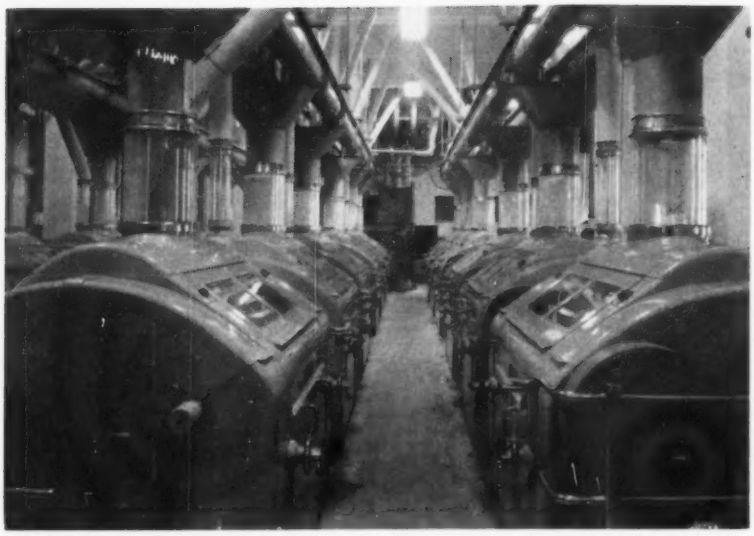
All finished products are delivered by conveyor to the desired bulk flour bins, which are equipped with mixing machines that are chain-discharged.

By way of background, entire erection of the plant and installation of equipment were carried out under the supervision of one of Buhler's chief erectors. As part of the over-all planning, the Showa Sangyo firm sent one of its young millers to the flour milling school at St. Gall, Switzerland, in





SIFTERS IN THE photo at the left, designed and installed by Buhler, are planned to provide the most favorable ratio possible between sifting capacity and floor area. At the right can be seen the mill's purifier arrangement. Three layers of sieves have been incorporated into operations which comprise the Tsurumi mill.



HERE IS THE roller mill floor of the mill at Tsurumi, equipped with pneumatic engaging and disengaging, power-saving roller bearings, speed regulators and water cooling.

1959 for training. The young miller has since completed his training and returned to Japan.

With starting up of the mill at Tsurumi, almost 16,000 cwt. of flour, or almost 1,000 metric tons of wheat a day, are now ground in Japan on equipment designed and installed by the Swiss firm. This is exclusive of mills where Buhler has supplied machinery for partial modernization programs. «

Fleischmann Issues Baking Industry Report

The Fleischmann division of Standard Brands, Inc., has released its latest compilation of statistics on the baking industry. A bakery census digest, the report combines under one cover data on wholesale, home service, grocery chain and retail multi-outlet bakeries.

Figures for each of the baking industry categories reported are presented graphically for the U.S. as a whole and then broken down where feasible for each of nine regions.

From the information gathered, baking industry trends can be studied at both the national and regional level.

By bringing together reports made by the Census of Manufactures, Fleischmann has provided information on the baking industry in such key areas as product classification, employees and payroll, materials and shipments, value of bakery products and percent of dollar value of all bakery products shipped for the U.S. and the various regions.

The bakery census digest affords those in the industry an opportunity to analyze pertinent information in the field of marketing and to make business progress comparisons with others in the same size of baking operation.

As a part of the report, there are maps of the regions covered, along with census population estimates for each. «

USDA Grant Announced For Pasteur Institute

The U.S. Department of Agriculture has announced a basic three-year grant to the Pasteur Institute, Paris, for the study of the chemical and biological properties of wheat and barley proteins. The study will be aimed at increasing the utilization of U.S.-grown grains.

The grant, for 205,720 new French francs ($41,984) was awarded under a program financed by foreign currencies obtained from the sale abroad of U.S. agricultural commodities under Public Law 480. Funds used in this program are available only in the currency of the foreign country indicated and cannot be converted into dollars for research in the U.S.

Grants are administered by the foreign research and technical program division of USDA's Agricultural Research Service. «

TALK to the Pv Man it pays !

Check with Peavey before you make a decision on buying or selling grain. It takes only a minute by phone. Get the Peavey habit and you'll be in the habit of getting the best deal on every transaction. Peavey is always on the move in the grain business—expanding, improving, investing, researching. Its knowledge and facilities can help you make a profit. Check with Peavey before you deal—

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'Bread' Is the Word, Whether It's Baked Plain or Fancy in Any Land

By DIANA DENECKE

Northwestern MILLER Feature Writer

WHEN THE SPRING wheat starts a-borning and the winter wheat is high, it's time to move the food and family out-of-doors.

For some, this is the backyard patio; for others, a picnic in the local park. The most enthusiastic are busy gathering the camping gear. But even eating on the back porch has a way of stimulating appetites.

Diana Denecke

In gay Paree a lovely spring day calls for a romantic stroll to a sunny spot to enjoy a crusty long loaf of French bread with cheese and wine. From every shopper's string basket extends the tapered loaf. Its shape and sturdy character make it ideal for balancing on the back of a bicycle. The international popularity of the French bread is amazing—but then, can 50 million Frenchmen be wrong?

Meanwhile, in Italy, what type of bread takes their fancy? It's an herb-coated, biscuit-like bread, transformed into the famed Roman Sandwich. This European version of our Dagwood Sandwich is a meal in itself; layer upon layer of cheese and sausage plus a touch of lettuce, zippily dressed with a vinegar and oil dressing.

But you needn't travel to Europe to enjoy their magnificent bread specialties. These priceless foreign recipes aren't just family secrets with obscure quantities of ingredients. Many of them have been up-dated to modern baking methods.

For example, can you imagine anything tastier with charcoal-grilled steak than homemade French bread?

The Roman Sandwich is based on a batter bread recipe — the electric mixer does the kneading. But remember, with yeast breads, the time consuming part of the process is spent in rising, a time when you can be doing other tasks. This "meal in a loaf" is ideal for teenage parties. Sandwiches can be made up ahead, then heated at serving time until the cheese is melting and the bread crisp and hot. Any appropriate types of fillings can be used, and it's hearty, so a little goes a long way toward satisfying young appetites. With fresh fruit and a beverage, dinner is served!

Here are the recipes, to bring culinary surprises and pleasures to family and friends:

FANCY FRENCH BREAD

1¼ cups warm water (not hot—110 to 115°)
1 pkg. active dry yeast
1½ tsp. salt
1 tsp. garlic powder
3 tbsp. soft shortening
4 cups sifted flour
Melted butter
¼ cup grated Parmesan cheese
¼ tsp. powdered basil
½ tsp. garlic powder
¼ cup grated American cheese
1 tbsp. chopped fresh parsley
½ tsp. garlic powder

Dissolve yeast in warm water in mixing bowl. Stir in salt, 1 tsp. garlic powder, shortening and half of flour. Mix with spoon until smooth. Add enough remaining flour to handle easily. Mix with hand squeezing dough between fingers. Knead dough until smooth and elastic—and no longer sticks to board. Round up in greased bowl; turn to bring greased side up. Cover with cloth. Let rise in warm place (85°) until double (about 1½

FRENCH BREAD, PERFECT SETTING

hr.). (If kitchen is cool, place dough on a rack over a bowl of hot water and cover completely with a towel.) Press 2 fingers into dough. It will leave indentation when dough is doubled. Punch down. Let rise again until almost double (about 30 min.).

Roll dough into 15 x 10 in. oblong. Brush with melted butter. Sprinkle one end of rectangle evenly with Parmesan cheese, basil and ½ tsp. garlic powder. On other end sprinkle American cheese, parsley and ½ tsp. garlic powder. Roll up tightly toward you, beginning at wide side. Seal edges well by pinching together. With a hand on each end, roll gently back and forth to lengthen loaf and taper ends. Place it diagonally on lightly greased corn meal-sprinkled baking sheet. Make ¼ in. deep slashes across top of dough at 2 in. intervals. Brush top with cold water. Let stand uncovered about 1½ hr.

Heat oven to 375° (quick mod.). Brush loaf again; bake 20 min.; then remove from oven and brush with a mixture of 1 unbeaten egg white and 2 tbsp. water. Bake 25 min. more.

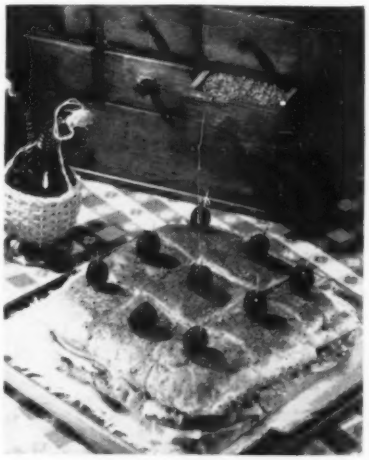
Note: If only one kind of filling is desired, double preferred filling ingredients. Packaged grated American cheese must be used.

ROMAN SANDWICH

1¼ cups warm water (not hot—110 to 115°)
1 pkg. active dry yeast
2 tbsp. soft shortening
2 tsp. salt
2 tbsp. sugar
3 cups sifted flour

In mixer bowl, dissolve yeast in warm water. Add shortening, salt, sugar and half of flour. Beat 2 min., medium speed on mixer or 300 vigorous strokes by hand. Scrape sides and bottom of bowl frequently. Add remaining flour; blend with spoon. Scrape batter from sides of bowl. Cover with cloth and let rise in warm place (85°) about 30 min. (If kitchen is cool, place dough on a rack over a bowl of hot water and cover completely with a towel.)

Beat batter about 25 strokes. Spread evenly in greased 9 in. sq. glass pan. Pat top in shape with floured hand. Brush with egg white glaze (1 unbeaten egg white and 2 tbsp. water) and sprinkle with 1½ tsp. to 1 tbsp. oregano, ½ tsp. salt and ⅛ tsp. pepper.



ROMAN SANDWICH

Let rise again until double, about 40 min. Heat oven to 350° (mod.). Bake 45 to 50 min., until brown. Remove from pan, cool thoroughly on cooling rack. Slice horizontally through center of loaf, making two layers. Fill with moist salami and Provolone cheese or variations. On bottom half of loaf, place layer of cheese, then meat, and top with layer of cheese. Replace top of loaf and place on large sheet of aluminum foil or brown paper. Cut for serving. Do not cut completely through loaf. Wrap tightly and reheat 30 min. at 425°F.

Variations: Try boiled sliced ham or other luncheon meat and American, Swiss or Colby cheese in place of salami and Provolone cheese.

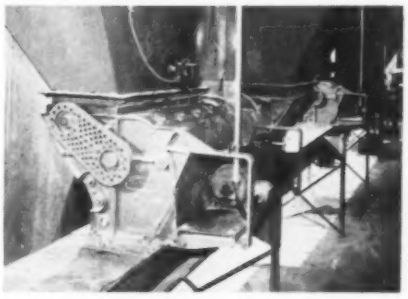
Success Tips: When removing from pan, place towel over pan, invert on cooling rack. Place another inverted cooling rack on bottom of sandwich and turn the whole thing over. The loaf will be right side up. (Top may be wrinkled.)

Make loaf of bread ahead of time, wrap and keep refrigerated overnight. «

WHO IS DIANA?

THE MILLER, with this issue, is pleased to introduce a new writer. She is Mrs. Paul Denecke, formerly with the public relations department of General Mills, Inc., Minneapolis. She recently "retired" from her public relations position to spend full-time pursuing her duties as a housewife at her home in the Minneapolis suburb of Golden Valley, Minn.

Mix with DRAVER accuracy dependability economy



After operating these eight Draver Micro-Master Feeders for three years, this user reported:

"We are completely satisfied with the performance of our Draver Feeders. We feel that this installation is an important and very necessary integral part of the over-all system, yet one which has required no attention or servicing since installation three years ago."

If consistent blend accuracy—and dependable production with minimum maintenance—for a reasonable original investment—are important to you, too, choose trade-proved Draver Feeders. Models for batch or continuous mixing; optional remote controls. Write for Catalog 806.

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Part VI

The Flour Milling Industry

An Economic Study of Excess Capacity

By Dr. Donald A. Markwalder

STRUCTURE OF THE FLOUR MILLING INDUSTRY

IN structure the industry has approached the purely competitive. Though the Census of Manufactures shows the number of establishments to have declined from 10,788 in the 1914 Census to 803 in 1954, it is still true that we are dealing with an industry in which the number of firms is large. As a matter of fact, rapid decline in the number of firms should not be taken to mean that the number of firms capable of competing in any local market has declined significantly. Over a period of time the industry has been transformed from one of primarily small local markets to one of large regional markets, even to a national market.

Another structural attribute resulting in performance approaching the purely competitive is the fact that entry is very easy. Any rise in prices and margins above a competitive level would tend to lead to almost immediate entry. Under these circumstances the fact that only a few firms have entered the industry is further evidence of the existence of excess capacity and a low level of profits.

© Donald Alfred Markwalder, 1960.

Rapid decline in the number of flour milling firms also appears to be an indication of its unprofitability, as does its increasing concentration. Many smaller firms acquired have been either (a) bankrupt or (b) incapable of financing needed capital improvements.

Product Segmentation

Although this study is concerned with the entire U.S. wheat flour milling industry, our primary concern has been with firms having a daily capacity of 400 cwt. or more. At present such firms produce approximately 97% of the U.S. wheat flour output. Through questionnaires or interviews we contacted 111 of the 136 firms in the industry now having a capacity of more than 400 cwt. daily.[1]

Of these firms, 36 mill hard wheat flour only; 41 mill soft wheat flours only and 34 mill both hard and soft wheat.

Of the 120 firms on which definite information is available (taken from the 136 with capacity in excess of 400 cwt. daily), 84 sell more than 1% of their output as family flour and 41 sell 50% or more as family flour. And 32 of these 41 family flour firms sell family flour primarily or exclusively in the Southeast—i.e., south of the Ohio and Potomac rivers and east of the Mississippi.

Although precise statistics are not available, best estimates on declining family flour consumption are that it dropped from about 70% of total flour consumption during 1920 to 50% in 1948 and to 28% in 1950. Reportedly, approximately 40 million hundredweights, or 17% of U.S. flour output, is all-purpose family flour.[2]

Of this 40 million hundredweights, 32 million consists of mill-brand family flour and eight million hundredweights of private label flour. Approximately 11 million hundredweights are being used annually in flour base mixes.[3]

All but approximately 10% of the firms in the flour milling industry sell bakery flour. Between 36[4] and 40

[1]Ninety per cent of the U.S. rye flour output is produced by firms in the wheat flour milling industry. We found nine wheat flour milling firms in this segment.

[2]THE Northwestern MILLER, May 13, 1958, page 5.

[3]This estimate for mixes was made from data on mix consumption given in The Wheat Situation, U.S. Department of Agriculture, April 26, 1957, p. 26.

[4]The minimum figure is 36 because of information that 36 firms have mill brand family flour sales which are less than 1% of total flour sales.

firms do not sell a mill brand of family flour any more or mill brand family flour sales are less than 1% of their total flour sales.[5] As the family flour market has declined, these firms have found it expedient to engage in production of only bakery flour. Although these predominantly bakery flour firms are primarily located in the hard wheat producing regions, there are some in all flour producing sections of the U.S.

Many are in predominantly urban areas where per capita family flour consumption is only one-half to one-tenth as high as in rural regions. At least four of these bakery flour mills are owned by firms in the baking industry.

Although U.S. flour consumption has been almost constant during the past 50 years, the amount of flour used by the baking industry has—except from 1930 to 1934—been increasing continuously. Both cross-sectional and time series data show that demand for bakery products has a positive income elasticity, and so long as real per capita income increases, we may expect this trend to continue. Population growth, the increase in the percentage of women in the labor force and cost-reducing improvements in baking technology are also important factors in the increasing sales of the baking industry. This transformation of flour milling from an industry producing a product primarily for use by households to an industry producing primarily for bakeries has been accompanied by a continuous decline in importance of the product differentiation brought about by brands. Almost without exception, bakery flour is purchased on the basis of protein, ash, moisture and gluten quality.

The most rapidly growing segment of the milling industry is that which produces flour-base mixes. Prior to World War II the most important products were pancake, waffle and biscuit mixes.[6] Growth of this segment during the past decade has resulted primarily from the introduction of cake mixes.

The 1947 Census of Manufactures lists the value of mixes produced in that year at $142,657,000. In the year of the next census, 1954, the value of mixes produced had increased to $298,003,000—a gain of 108% since 1947.

During the same period, value added by manufacturing increased from $32 million to $103 million—an increase of 326%.[7] Much of this growth has resulted from the introduction of cake mixes. The 1954 Census of Manufactures lists the value of cake mixes produced in that year at $137,389,000. Since the category "mixes" was not further broken down in the 1947 census, it is impossible to determine from census data growth in the value of output of various types of mixes.

Branding and advertising have transformed family flour into a highly differentiated product. From the demand side the market is local, and the number of sellers in most local markets is few enough to bring about conjectural inter-dependence. The number of mill brands of all-purpose family flour sold in any town or city varies from a low of three or four to a high of six or seven or more and is usually directly proportional to per capita family flour consumption in the area.

The level and time trend of demand are important determinants of prices, output and profits in any industry. In flour milling, demand has behaved in such a manner as to be an important contributing factor to the problem of excess capacity.

The price elasticity of flour demand is very close to zero. Thus, when demand rises, output must be increased relatively sharply, because the quantity demanded at the higher price occasioned by the increase in demand is substantially the same as at a lower price. On the other hand, a decline in demand means that margins and prices can fall to low levels without occasioning any increase in the quantity demanded.

From the point of view of the long-run capacity adjustment of the industry negative income elasticity of demand is even more unfavorable than the low price elasticity of demand.

As incomes have risen in the U.S., per capita consumption of flour has almost continuously declined. The rate of population growth in the U.S. has nearly matched the rate of decline in per capita flour consumption, leaving total domestic flour consumption approximately constant for the past 50 years.

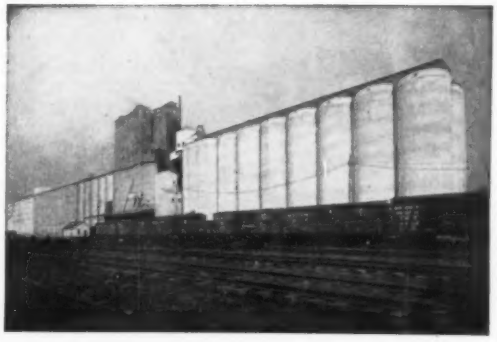
There have been sharp fluctuations in demand for flour produced in the

[5]Several of these firms which no longer sell a mill brand of family flour do, however, mill private label family flour.

[6]The first time the Census of Manufactures listed "mixes" separately was for 1939. In that year this category included only firms not in milling. Since the value added by manufacture in this category in 1939 was only $3,928,367, it is evident that a very large majority of mixes were being produced by milling firms.

[7]In addition, the evidence indicates a 50% increase in cake mix production since that time. THE Northwestern MILLER, May 28, 1958, Sec. II, p. 47.

STRATTON-THEIS GRAIN CO.



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F. J. FitzPatrick, Vice Pres.
W. C. Theis, Secretary

Excess Capacity Study (continued)

U.S. These have resulted from fluctuations in export demand rather than domestic demand. Contrary to the situation which exists in the domestic market, the quantity of flour which can be exported by U.S. flour milling companies is moderately sensitive to changes in price. Thus, in the period before World War II, when wheat price supports were not so effective as they have since become, large wheat crops would lower wheat prices and lead to significant increases in flour exports.

On the other hand, when U.S. wheat production was extremely low, U.S. wheat prices would be relatively high and exports of flour would diminish sharply.

Even though the fluctuations in U.S. flour exports resulting from changes in the domestic wheat production have been large, they have not approached the magnitude of increases or decreases in exports during and immediately following both World War I and World War II. But these periods of a booming export market were relatively brief and the slumps following worsened the problem of excess capacity.

As a result of the almost horizontal long-run time trend in both domestic flour consumption and exports, the long-run time trend in flour production has also been almost horizontal. High flour output of the period 1913-56 was reached during the 1946-47 crop year, when 304.8 million cwt. of flour were produced. The low was reached during the 1933-34 crop year, when only 184.6 million cwt. were produced. During 1946-47, exports were more than 10 times as large as during 1933-34.

Capacity Changes

According to THE Northwestern MILLER's capacity statistics, U.S. flour milling capacity declined during each year in the 1907-14 period, then began to rise as a result of the increase in flour exports brought about by World War I. With the exception of the year 1917, capacity then rose during each year of the 1915-22 period—thus setting the stage for the industry's severe excess capacity problem.

As a result of locational shifts—particularly capacity increases made at Buffalo and in the Southwest—capacity did increase again in 1926 and 1928. Then it declined again during all but three years of the period 1929-54.

By 1954 capacity had declined to 1.07 million cwt. daily—approximately half of the 1907 figure. Seriousness of the excess capacity problem and some quantitative assessment of its magnitude may be arrived at by noting that, in spite of the continuous increase in flour output from the 213.9 million cwt. during the 1941-42 crop year to the 304.8 million cwt. of the 1946-47 crop year, capacity continued to decline.

Regional Excess Capacity

If we could abstract from transportation costs and assume that a firm located anywhere in the U.S. could successfully compete in any flour market in the country, the problem of excess capacity would have been much less difficult to solve. The actual facts, however, are much different, because inter-regional competition has resulted in substantial additions to flour milling capacity in some regions in spite of the existence of excess capacity in others and in the national market.

At present, the five regions of the U.S. which produce the largest quantities of flour are the Central States, the Northwest, the New York Region (Buffalo), the Southwest and the Pacific Coast. As of 1956, these five regions contained 905,000 cwt. of daily flour milling capacity, or 84.6% of U.S. flour milling capacity. We will now briefly discuss milling in each of these regions.

THE CENTRAL REGION[8]—As of 1900 the Central Region was by far the most important. It constituted the largest wheat producing region of the U.S., but wheat production had already begun to decline as a result of sharp competition from the states in the Northwest and the Southwest. States of the Central Region were ideally suited for production of feed grains. Improved machinery, dry farming techniques and improved wheat varieties made it possible for the Plains States to produce wheat more cheaply. As wheat production moved westward, so too did flour milling capacity and output—leaving a severe excess capacity problem in the Central States.

THE NORTHWEST[9]—Even prior to 1900, wheat production and flour output had been growing rapidly in the Northwest — especially in Minneapolis—due to a combination of favorable circumstances. Most important of these were growing wheat supplies, an expanding railway network in the region, and discriminatory railroad rates. Flour output grew very rapidly in and around Minneapolis, and by 1880 it had become the leading flour milling city of the world.

Milling capacity and output continued to increase in the Northwest until approximately World War I. Then, as a result of a series of railway rate changes unfavorable to the Northwest but favorable to Buffalo and the Southwest, capacity and output in the Northwest began an almost continuous, long-term decline.

BUFFALO[10]—As late as 1900, Buffalo was not an important milling center. However, beginning in approximately 1900 a series of favorable rate changes resulted in the growth of flour milling output and capacity at Buffalo—a growth which has continued almost unabated throughout this century.

THE SOUTHWEST[11]—The region in which flour output is now largest is the Southwest. Milling began to develop in the area prior to 1900. Its period of most rapid growth was 1900-30, brought about by relatively low priced wheat and a series of favorable railway rate changes. Thus, as in Buffalo, capacity increased in the Southwest despite the fact that it was rapidly declining in the Northwest and in other milling regions.

THE PACIFIC COAST[12] — Since 1900 the trend of output on the Pacific Coast has been rising slightly. As a result of rapid population growth and slightly increasing wheat supplies, the excess capacity problem has been least severe here.

If the industry had been oligopolistic, profits might have remained at the normal level in spite of excess capacity. But in flour milling the strong pressure of each firm to increase operating rates and lower costs has driven prices to marginal cost-determined levels. «

[8]Illinois, Indiana, Iowa, Wisconsin, Ohio, Michigan and Missouri.

[9]Minnesota, Montana, North Dakota and South Dakota.

[10]Almost all of the milling capacity in the New York region is located in and around Buffalo.

[11]Kansas, Oklahoma, Texas and Nebraska.

[12]California, Washington and Oregon.

In Part VII Dr. Markwalder will take up the subject of costs in the flour milling industry. He will discuss initially the relative importance of component costs of flour production, then moving into capital equipment, the short-run cost curve and the long-run cost curve.

the NORTHWESTERN MILLER.

The Editorial Image

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Senior Member of Buffalo Corn Exchange 'Turns Back Clock'

By JOHN WATSON
Northwestern MILLER Special Correspondent

PRIOR to his recent retirement, James G. McKillen, grain trader on the Buffalo Corn Exchange, could look around him, scanning fellow businessmen on the trading floor, and remark with pride, "I was here before all of you!"

And none would have been able to dispute him.

At 78 years of age, with 63 years of service to the feed grain business behind him, Mr. McKillen is the only living survivor of the original group of grain men who joined the corn exchange when it was formed back in 1904.

Actually, Mr. McKillen believes there's a good chance that his career in the grain business may cover a longer span of time than anyone else in the country—and he's open to challenge on that point. At least he isn't aware of anyone currently active with a longer period of service, and Mr. McKillen knows quite a number of men in the business across the nation.

One point is certain: He has put in more years of service as a director of the Buffalo exchange than any other person, over 30 years. The veteran grain merchant served two terms as president of the exchange, in 1928, and again in 1938.

Mr. McKillen began his career in 1898 as a stenographer with the old Chicago-O'Neill Grain Co., managed at Buffalo by the late Dudley M. Irwin.

"I earned $5 a week," he recalls, "and that was good pay because the other fellows were getting only $3." Later, he became a bookkeeper, then Mr. Irwin's partner in their own firm.

James G. McKillen
"I was here before you!"

About 1920 Mr. McKillen branched out on his own, setting up the present company bearing his own name. This was in the old board of trade building in Buffalo. In those days, he recalls, Buffalo had many wooden elevators, and occasionally one would go up in smoke.

Canal Traffic Heyday

Those were the days, says Mr. McKillen, when the Barge Canal was in its heyday. A man didn't need to use a bridge to cross the canal because the barges were so thick he could just walk across on them.

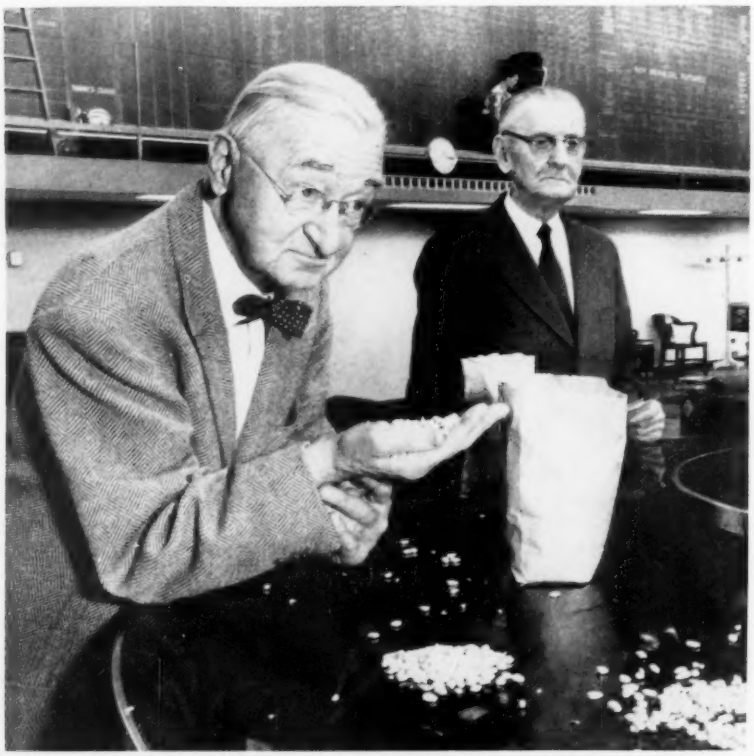
Although Mr. McKillen traded in corn and oats rather than in wheat during Buffalo's growth as a milling center, he considers it a warm, wonderful memory to look back on the community's growth because of its strides in milling.

Actually, his career covered some of the most turbulent days in the history of the world and the grain trade —two world wars, the great depression, the Korean action, each with its particular impact on his business and the grain trade.

The old-timer hasn't favored the idea of quitting business. But upon retirement he did dissolve his own firm, James G. McKillen, Inc., closing his office in the corn exchange. He just doesn't believe there's room for a lone wolf any longer.

Along with others who share the same view, he considers consolidation of many small businesses as the greatest change in the industry over the many years he has observed it.

As to retirement plans—well, he's lived at the same address in Buffalo 48 years, and doesn't have any special ideas about changing at this point. «



VETERAN GRAIN MAN, James G. McKillen, "in action" on the floor of the Buffalo Corn Exchange. To his left is Otto E. Auerbach, president, E. E. Auerbach, Inc., observing Mr. McKillen's "sampling technique."

New Faces for Old

Fisher Flouring Mills Gives Package Line Periodic Face-Lifting to Tell Product Story, Help Selection

What makes an effective package "jump out" toward the consumer, particularly a food package containing milled cereal products?

Like the human face, the most attractive package combines the best attributes of form, configuration, color and harmonious arrangement of all components.

Fisher Flouring Mills Co., Seattle, now observing the 50th anniversary of its founding, has put its products through a series of packaging changes, all designed to tell its story better, thereby helping the consumer in selection of its packages and making that selection a pleasant experience.

Two years ago Fisher Flouring converted from paper bags to a crisp, over-wrapped carton for all of its variety flours and Wheat Germ. Since then, explains Robert L. Erzinger, sales and advertising manager, the company's Wheat Germ has had additional face lifting.

Fisher has added the information, "Natural, Not Toasted," in red against the basic golden package background. The product name "Wheat Germ" is in bright blue. This tone is repeated in the bowl pictured with a serving of cereal topped by Wheat Germ.

Carrying its designing a step further, the company has turned to color renderings on its new packages in the Handypak line, with the exception of buckwheat flour.

New Element

The Wheat Germ package also has a new element, representative of the complete Handypak line. This is use of the word "de luxe" on the face copy. Added under the name "Fisher's," it gives a continuity of message: "Fisher's De luxe Wheat Germ."

For the purchaser who wishes instructions for use of the wheat germ product in its natural state, a 90° turn of the package presents a side panel, where suggestions are easily found. The other side panel gives an analysis of the product, including a tabulation of its vitamins and minerals. Turned around to the back, the customer finds recipes for adding Wheat Germ to meat loaf, muffins and other foods.

Pancake Package

Fisher Flouring considers the addition of a numerical designation to its pancake mix package a key element in development of product recall—and repeat requests for the mix.

About 10 years ago its pancake mix was taken out of its "Handysack" bag and put into an over-wrapped carton. The formula was changed, too. "Mix 27" was added to the packages in the form of stickers. Customers began to ask for "Mix 27," so this designation was later made the dominant element of the face design. To accomplish this, another package element was eliminated.

Basic, vibrant pastel colors are retained for new packages in Fisher's Handypak line, except for the buckwheat flour. The "family line" teaches the consumer to look for cracked wheat in a summer sky blue; yellow corn meal in a sun yellow package; rye flour in a lilac colored package; graham flour in spring green; whole wheat flour in wild rose color.

The white of the buckwheat flour wrap is a conducive background for the photograph of a stack of brown buckwheats and a jug of maple syrup.

In another area, Zoom, Fisher's instant wheat cereal, soon to observe its 20th anniversary, was given a new package earlier this year, just one change in a cycle of progressive packaging.

The company's Ala, or modernized version of ancient bulgur, was introduced about six years ago, and the package has remained comparatively the same throughout successive printings. It features a red background. In June of last year the Kosher symbol, "U," was added to the Ala package.

A little over a year ago Fisher introduced Old World Wheat Pilaf, which is now being distributed nationally. The over-all background of Pilaf's board package is embossed gold, signifying a gourmet product. The package contains two packets of selected rare spices for use in the preparation of Old World Wheat Pilaf, which is one of the exotic recipes on the package.

Fisher's grocery products division functions as the promotional organization for Zoom, the variety flours, Wheat Germ, Fisher's blend flour, and the specialty foods, Ala and Old World Wheat Pilaf. «

FISHER FLOURING MILLS CO. has made some basic changes in its Wheat Germ package which can be seen by comparing the old package at the left with the newer one. Note "De luxe" on re-designed package at the right, addition of the words "Natural, Not Toasted," and emphasis on the bowl.

YEARS AGO

From the Files Of THE MILLER

By Sarah Yocom

Well, good readers, after building you up for a scrapping good fight between Collins and Gathmann and R. L. Downton (THE MILLER, May 15, page 30) at the 1876 Millers' Convention, I am saddened to report that the "great contest" resulted in a "grand fizzle." My profound apologies to you and I must admit to disappointment in C&G for their lack of "grit." After all, I've been bragging about the good old days.

THE Northwestern MILLER
May 26, 1876

Messrs. Collins and Gathmann of the Garden City purifier, who have been challenging the world to a contest of purifiers for the last six months, and whose challenge has been repeatedly accepted by R. L. Downton, the gritty and energetic proprietor of the air machine, have finally been forced to a square back-down. They write that they are not willing to test their machine against his at the millers' convention in June simply because Downton wants the time of cleaning the middlings, the amount carried over the tail of the sieve and the waste in the dust room taken into consideration. What would be the benefit, we beg to ask, if these plain matters are not tested? . . . Millers who understand their business will look upon Collins and Gathmann's objections as entirely "too thin."

●

But, the battle between Ostrander and Hoppin and their emery wheel versus all-comers in the form of competition goes on:

On the first page of this issue of THE Northwestern MILLER is a letter from R. L. Downton of purifier fame, in answer to a certain advertisement in one diabolical competitive journal. The letter strikes from the shoulder, and is perhaps a little severe on some parties mentioned, but as a whole it is a masterly defense, striking right and left and slapping poor Notbohm in the face so often he will undoubtedly conclude he got the wrong pig by the ear when he woke up Downton.

●

Messrs. C. A. Pillsbury and Co. paid out silver to their employees on the 20th, thus being the first among the millers of Minneapolis to resume specie payments. That is one of the fruits of using the improved emery wheel stone dresser.

●

Odds 'n' Ends—

50 YEARS AGO . . .
May 24, 1911

At a recent meeting of the Iowa Master Bakers Assn. Henry Metz, one of the principal Sioux City bakers and chairman of the entertainment committee, gave a picnic luncheon at his farm near the city. The visitors were taken to it in automobiles. At the instigation of Elmer Johnson, the leading automobile carrying the new officers of the association was stopped by the chief of police and each of the occupants fined $2 for exceeding the speed limits. The money was afterwards spent for cigars.

●

Minneapolis flour output last week showed a further decline of 1,810 bbl. The quantity turned out (week ended May 20) was 268,555, against 295,040 in 1910 and 268,670 in 1909 and 265,625 in 1908.

●

The big break in the Erie Canal, which occurred Saturday, will probably turn some grain intended for that route to the railroads. Repairs will be completed in two weeks, possibly sooner. The first rush of canal business is over, and until the lake trade brightens up, there will be little for the canal to do.

●

25 YEARS AGO . . .
May 27, 1936

E. W. Morrison, who recently acquired the property of the Alliance Milling Co. at Denton, Texas, has arrived there to take charge. He was accompanied by J. D. Gifford of Topeka, Kansas, who will assist him. Mr. Morrison is a native Texan and his first experience in his present business was selling flour in western Texas.

●

Morris Shumofsky, president of Bamby Bread Co., Bridgeport, Conn., flew his plane to Lakehurst, N.J., to greet Commander Hugo Eckener, of the German dirigible Von Hindenburg. Mr. Shumofsky was aboard Dr. Eckener's Graf Zeppelin when it made its maiden flight across the Atlantic in August, 1929.

●

Octave Tripette, president of Tripette and Renaud Fils Mfg. Co., Sailly Saillisel, North France, arrived in the U.S. this week to attend the 41st annual convention of the Association of Operative Millers which begins on June 1, in Dallas, Texas.

●

10 YEARS AGO . . .
May 29, 1951

The Wheat Flour Institute has launched a mammoth promotional program designed to answer the question: How much more bread will America eat, if America eats all it wants without fear of getting fat?

Termed a million dollar idea that costs individual millers and bakers but a fraction of a cent, the program supplies a detailed plan and weapon to attack the "fattening phobia."

●

Milling, the Liverpool trade publication, reports that a woman operative at a Sheffield, England, mill was questioned by a police officer about some flour found in her possession. She tried to excuse the fault with the remark, "It's Canadian flour, better than you get in the shops." It is reported with regret that the good lady who showed herself such an excellent judge of flour faced an unsympathetic magistrate who fined her $2.80.

●

Civilian per capita consumption of wheat flour in 1951 will amount to an estimated 136 lb. This preliminary indication of per capita use was reported by the Bureau of Agricultural Economics in its latest National Food Situation report. Consumption in 1950 was also 136 lb. representing a 1-lb. increase over 1949.

Per capita consumption of wheat breakfast foods in 1950 is estimated at 3.3 lb., unchanged from the previous year. The same rate of use is indicated for 1951.

Per capita consumption of rye flour in 1950 is estimated at 1.4 lb. This represents no change from 1949 and the same rate is expected to hold for 1951. «

Cargill Using Pneumatic Probe For Taking Samples of Grain

Cargill, Inc., as a contribution to speedier, more efficient grain handling, has introduced a vacuum-powered pneumatic probe which uses airpower to penetrate and take samples from stored grain.

Named the "Probe-A-Vac," the unit reportedly can as much as double speed and raise the accuracy with which large piles of grain can be sampled, inspected and treated. It was shown at the recent national convention of the Grain Elevator & Processing Superintendents in Hutchinson, Kansas.

F. M. Parkinson, special products manager of Cargill, in speaking of the "Probe-A-Vac," pointed out how grain inspection has been made more difficult in recent years by the advent of larger storage units. "Probing massive piles of grain has been, at best, tedious and expensive," he added.

An invention of Cargill's grain research laboratory, Minneapolis, the unit uses air circulation through a tube-within-a-tube and a special pointed nozzle to "eat through" a pile of grain.

Commercial Testing

"Superintendents at 20 Cargill elevators where the unit has been tested under commercial conditions report two men can make three probes hourly in wheat 50 feet deep," said Mr. Parkinson.

Suction of the inner tube "airlifts" the grain into a cyclone separator where it is held for sample.

"The probe can draw a representative cross-section sample of the entire pile or a portion of grain from any desired depth," he claimed. "There is no waiting for the entire probe to be withdrawn before the sample can be inspected."

Maximum recommended probe depth is 72 ft., although tests have proved successful in bins more than 80 ft. deep, he reported.

Key to the unit is said to be the probe-point nozzle which guides grain into the air flow. Nozzles are available for both fine and coarse grains.

The probe tubing is made in interlocking six-foot sections.

The unit also can be used to place temperature cables. A special fitting on the nozzle holds the cable as the probe is forced down, then leaves it in place in the pile as the probe is withdrawn.

"Hot spots" due to insect damage can be treated by penetrating the infested area and pouring insecticide through the tube. The fluid distributes through the nozzle openings into the trouble spot.

Special Usage

Additional uses under examination by Cargill include special pneumatic truck and car probers that convey grain directly to sampling rooms; a truck-mounted unit for probing grain stored in other than conventional elevator bins, and adaptations for probing a variety of other granular commodities.

The unit is made in two models. The first carries a 1-h.p. motor and is designed for probes of up to 30 ft. The second is equipped with a 1.5-h.p. motor for deeper probes. Both motors are small, high-speed 110 volt electric open types.

THE ROCKET-LIKE nozzle is the key unit in Cargill's new grain probe. As the pointed tip penetrates a grain mass, slotted openings guide samples into the probe tube to be "airlifted" into a cyclone separator. Nozzles are available for both fine and coarse grains, with the one pictured being the fine-grain model. Examining it is R. W. Bendtsen, technician in Cargill's grain research laboratory.

Current models are custom made, Mr. Parkinson said, with production models scheduled for July 1 delivery.

A patent application has been filed on the probe, Mr. Parkinson concluded. «

TWO MEN AND A vacuum motor drive Cargill's new pneumatic probe into a pile of wheat at the company's big-bin terminal near Savage, Minn. Grain samples are "air lifted" up the probe's inner pipe, shown here with the vacuum tube attached, and deposited in the cyclone separator at the right.

A Tour of the American Middle West

A British Milling Team Gives Its Impressions

I THINK at the outset it might be interesting if I should give you some information with regard to the bodies in America who acted as sponsors and hosts, and in fact paid all the expenses of the team.

Some years after the end of the last war, the growers in most of the states in the Great Plains came to the conclusion that they, as growers, had their part to play in endeavoring to insure that the wheat they grew would have sufficient outlets, particularly export outlets. State associations of wheat growers were organized as far back as 1948, and in the middle '50's. First Nebraska and then Kansas formed wheat commissions, which not only were intended to help the sale of wheat, but were also to be used for improving farming economics and wheat quality, considering possible additional uses for wheat, and other relevant matters. At the beginning of 1959 the Great Plains Wheat Market Development Assn.* came into being, and this body co-ordinates the activities of these state associations and commissions to which I have just referred.

The development association's policy is simple and clear-cut. It is to dispose of every bushel of wheat possible in the foreign market, the domestic market, and in new outlets and uses. But it also takes on two other tasks, both important to the welfare of the wheat grower. These are the survey and study of marketing problems, and the duty of explaining agriculture's problems to consumers.

The association was not set up to buy or sell wheat, and its sponsors have no intention of doing so. Actual transactions will remain in the hands of the established grain trade.

Editor's Note: Now Great Plains Wheat, Inc.

What do the British millers think of the U.S. Middle West, its wheat and suitability of that product for their requirements? Some months ago a group of these flour millers made a visit to the U.S. Later, a report of their observations was given to a general meeting of the National Association of British and Irish Millers. Members of the delegation which visited the U.S. were A. Howard Shone, D. F. Armstrong, H. W. Collier, F. C. Holt, L. B. King and H. P. Lord. The report was made by Mr. Shone.

Drive for Foreign Markets

From our point of view, as millers in this country, the most relevant part of the work of the Great Plains Wheat Market Development Assn. is in connection with its drive for foreign markets. But I may say in parentheses that I personally have recently wondered as to how far it may be tempted to enter into other matters which might not be quite so attractive to us. For instance, within the last month I have seen, as probably you have, reports that in Belgium an arrangement has been made between the Development Association and the National League of Belgian Bakers whereby a new loaf is to be marketed containing a fixed proportion of U.S. hard wheat. I have culled the following from a recent edition of Corn Trade News:

> "The joint effort is designed to stimulate the use of flour and bread containing U.S. hard wheat, in addition to general eat-more-bread promotion. Operations will also establish a trade mark and wrapper design for the loaf which will identify the wheat used in the flour. Only bakeries agreeing to comply with the formula for the loaf will be licensed to use the trade mark."

As to how far millers in this country would approve of similar action here I, personally, am a little doubtful, to say the least. However, I make reference to this just in passing, for one cannot help being impressed by the obvious desire and determination of the growers in the Middle West to increase their export markets. It is refreshing and inspiring to note independent action of this sort rather than reliance on government or government agencies.

The importance and success of the association must not be underestimated, and only during the last two or three days I have noticed two press references to their activities. The one in connection with efforts to reduce freight rates to Gulf ports is apparently successful. The other is the fact that they are pressing for the inclusion in the official grain standard of the Zeleny sedimentation test.

I do not intend to weary you with a full account of all the travelling, visits, and inspection carried out by the team. We visited New York and Chicago before flying to the Middle West, where time was spent in the states of Nebraska, Kansas and Oklahoma, at farms, elevators, grain exchanges, flour mills, bakeries, laboratories, and other most interesting and informative assignments. We then flew to Houston on the Gulf of Mexico to inspect port facilities there, and finally north to Washington, to which I will refer later.

Out-of-Date Grading

The main impression left on my mind when we were in America and confirmed by much thought since our return is this: The American system of grading wheat, though fully efficient up to a point, is really out of date under modern conditions, and it is not such as millers in this country could rely upon as a regular basis of purchase. This view was confirmed, I should say more than confirmed, by what we found to be the general attitude of the American millers, who in their buying did not rely on the purchase of wheat merely based on the federal grading system, but demanded and obtained something much more.

What happens is that the American millers, both large and small, draw up definite milling and baking specifications for the wheat they require. Such specifications are not unlike the type of analysis used by cereal chemists in this country, although I am bound to say that I, personally, did not think that the work of the cereal chemists in America was as advanced as that being done here. I may be quite wrong in this, for I am

Reprinted from Milling, of Liverpool

far from being a technical expert. I just mention it as a personal opinion. These specifications prepared by the individual American millers and varying according to individual tastes and preferences, are known to the proprietors of elevators, who as merchants, when they have wheat available in their elevator which is of the required type, offer it to the miller concerned. Whether the miller buys it or not, depends, of course, on his market judgment, but I was interested to note on more than one occasion how far forward a miller did cover his requirements. This system does not mean that the grading arrangements are by-passed or ignored, for the wheat is graded into, say, No. 2 or No. 3 Dark Hard Winter when it leaves the elevator, and the price varies a cent or so according to its grading. But to the miller the more important factor is the securing of wheat of the specification which he requires.

Now it will be as obvious to you as it was to us that millers in this country, except possibly the very large groups, could not possibly make any arrangements in the States which would enable us to do what the American miller is doing, and the team made it very clear throughout their tour that this was the case. Therefore, when we came to Washington we looked forward in our meetings with the U.S. Department of Agriculture to finding out whether we could make arrangements to buy the type of wheat that we found the American millers were buying. In our meetings with the department we were, of course, received and heard with the utmost courtesy, and we spoke quite frankly of our views. It was pointed out to us frequently that improvements were being made all the time in the federal grading system. For instance, the addition of a protein declaration is now possible, and we admitted that in years to come it might well be that millers in this country would be fully prepared to buy on American Certificate Final Terms. We stated most categorically, however, that this time had not yet come.

Washington Report

I think perhaps I might be allowed to read to you now from the report I have mentioned previously, that part which referred to the meetings in Washington, and which confirmed what we had told them verbally. The report has, in fact, been sent to the U.S. Department of Agriculture.

"(1) In the Middle West we had seen wheat which we believed to be of good milling quality and of high protein, although we could not be quite certain of the quality as opposed to the quantity of the latter.

(2) Such wheat had certainly not been exported to the U.K. during recent years, at any rate, as far as any of the team were aware.

(3) As U.S. grading was not in fact the basis on which U.S. millers purchased, U.K. millers could not be expected to be content with wheat shipped under the ordinary grading rules.

(4) Although, as was natural, U.K. millers would always have to maintain purchasing contacts with other countries in our Commonwealth, we would be delighted to have further sellers of good strong wheat, and for this reason, we would be pleased to buy from the U.S.

(5) We reiterated, as we had done elsewhere, that we were not prepared to buy on Certificate Final, but suggested that a sample should be made up of good strong milling wheat, and that such should be sent to the Liverpool and London Corn Trade Assns. or to the individual grain importers in Liverpool or London, and that wheat should be offered against this sample, and that arbitration should take place if the receiver felt that an arrival was not up to the selling sample.

(6) We were asked to submit a specification, but we maintained that this was neither desirable nor possible. It seemed to the team, however, only reasonable that we should give some indication of the type of sample which would probably be acceptable, and we, therefore, suggest the following:

Minimum test weight 62-lb. per imperial bushel; shrunken and broken kernels 2% maximum; dockage and foreign materials ½ of 1% maximum; wheat of other classes 2% maximum; protein 14% minimum; moisture 12% maximum.

(7) The team hopes that the foregoing suggestions (5 and 6) may receive the careful consideration of those concerned."

And there the matter rests, at any rate at present.

I may mention that what I have just read to you was sent to America in July of last year, and although very polite and courteous letters of ac-

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knowledgment were received, nothing further has transpired. If you will forgive another personal opinion, I am bound to say that I am a little doubtful as to how far the American authorities will be influenced by the relatively small offtake of wheat which would be possible for them in this country. When we were in Wichita we attended a dinner at which the chief guest was Mr. Patel, the Indian minister of agriculture. He had just completed a deal amounting to 16 million tons. Only two or three weeks ago I noticed that the total U.S. exports of wheat during one particular week amounted to 499,900 tons, only 100 tons below the half-million mark for one week! When you consider what would be the maximum quantity under optimum conditions that the U.K. could take, bearing in mind our Commonwealth and other contacts, it is not surprising to query in one's mind how much importance they will attach to exports to this country.

This perhaps is a pessimistic view. More optimistic is to refer to President Kennedy's address to Congress when he said:

"I am deeply concerned that our farm program is drifting into a chaotic state, piling up surpluses, penalizing efficiency.

"I propose an export drive for dollar sales, more sales abroad for local currency, bigger gifts of food to needy people abroad and better research into new ways of processing surplus crops."

We will just have to wait and see.

American Way of Life

Now I wonder if you would allow me to conclude with some personal views arising out of our trip and in regard to our relationship with the great American nation. You may think it frightfully impertinent for me to do so after being less than four weeks in the country, and indeed I feel it is something on a par with the action of lady novelists who write books on countries in which they have spent only a long week-end. On the other hand, during recent months I have been very much impressed by conversations with the president of our national association in which he has stressed the importance of international relationships in Europe, and in which connection he has done such admirable work through the international millers' association. If, as they are, these good relations are important with other European countries, they are surely as important, if not more so, with the English speaking American nation.

Being in the Middle West was intensely interesting, for one has always understood that the spirit of isolationism was stronger there than elsewhere in the U.S.

My own opinion was and still is, that possibly this may be what I can best describe as the official attitude, but I am sure it is certainly not the attitude of the average individual. All the team would, I know, bear me out in stating that without exception everybody we met showed for this country what I can only describe as an affection for us as a people and particularly as individuals. At times this was almost embarrassing, for complete strangers, when they heard our uncouth English accent, would come up to us and ask if we knew "so and so" of "somewhere near Birmingham."

On the other hand, confirmation of my view as to what I have described as the official attitude came at the time of Princess Margaret's wedding, when leading articles in the newspapers (the official attitude) of which I have one here, were couched in a tone blending criticism, sarcasm, and downright opposition. But I truly believe that the man in the street, and of course the woman, showed more interest in the wedding than even was the case in this country.

You, Mr. President, have shown the supreme advantage of individual contacts in your work on the continent of Europe. I hope and believe that in a very small way the team that went to America did something towards helping international relations and promoting goodwill in that sphere.

One final point: The view is often expressed that the U.S. in its give-away program is really only thinking of No. 1, and hoping to consolidate export markets to the detriment of other exporters. This, I believe, is a wrong view. I do not mean to say that possible future benefits are entirely ignored, but I was impressed during several conversations I had in America with the really humanitarian outlook towards the poorer nations of the world of many of those concerned with the wheat export problem.

As an example, I may mention a long conversation which I had during one plane trip with a man about whose sincerity I had not a shadow of doubt. His problem, which he was good enough to discuss with me, was not whether a new job which had been offered in the export program would yield him more remuneration, but whether it would give him more opportunity of service to mankind. This, I believe, is not an uncommon attitude, and in a very humble way I pay tribute to it. «

Elevator Purchased

Frank W. Bartlett, president of Bartlett & Co., Kansas City, has announced purchase of the 2.5 million bushel grain elevator at Council Bluffs, Iowa, from the Chicago, Great Western Railway. The elevator has been leased to the Updike Grain Corp., Omaha. Bartlett & Co. will take over the facility Aug. 1. «

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Atkinson Milling Realigns Executive Duties; Dudley J. Russell President

Atkinson Milling Co., Minneapolis, has realigned its executive responsibilities, including the election of Dudley J. Russell as president, succeeding the late Fred M. Atkinson, who died earlier this month. Mr. Russell was secretary of the company and assistant to the president.

D. J. Russell

Directors of the firm also named Mrs. Dorothy Atkinson Rood, Mr. Atkinson's mother, to the board as his replacement.

A recommendation also was made that William B. Atkinson be named as an additional director of the company when the annual meeting of stockholders is held in July.

Mr. Russell and the late Mr. Atkinson attended Dartmouth College at the same time. Mr. Russell was president of Duluth Universal Milling Co. before joining Atkinson Milling in 1958. He is a past president of the Duluth Board of Trade and a member of the Minneapolis Grain Exchange, serving on its transportation committee.

He is a member of the Association of Operative Millers.

As secretary and assistant to the president of the Atkinson firm, Mr. Russell's primary responsibility was in grain, purchasing and related areas of market activity, along with quality control.

Dennis B. Schacht, formerly assistant treasurer, has been advanced to the position of company treasurer, another position held by Mr. Atkinson. E. C. Danielson will succeed Mr. Russell as secretary.

Continuing as vice presidents are E. D. Rogers, Jr.; Logan P. Johnson and Thomas J. Whalen. The position of chairman of the board has been reactivated and will be filled by William Mitchell, husband of Mrs. Mary Atkinson Mitchell, and for many years a member of the board of directors as well as the firm's legal counsel.

Civic Activities

While in Duluth, Mr. Russell served as president of the city council (1956-58); as president of the Duluth Kiwanis Club, and as president of the Duluth Chamber of Commerce. Currently, he is serving on the planning commission of the village of Orono, a suburban community west of Minneapolis. He also is a director of the Minneapolis and Hennepin County chapter of the American Red Cross.

Atkinson Milling Co. was established in 1914 by William M. Atkinson, who was president until his death in 1929.

His brother, Fred G. Atkinson, formerly with General Mills, Inc., and its predecessors, then took an active interest in the company, as did his son, Fred M. Atkinson.

The Atkinson plant in Minneapolis, with a daily capacity of 7,500 cwt. flour, supplies flour to commercial bakeries throughout the Midwest, the Central States and the East. The company reported sales last year of approximately $11 million, and is one of the largest independent firms in the industry. «

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What's Your Firm's Score In Public Relations?

(Here's a Check List to Help Determine Your 'PR Rating')

REAMS OF copy have been written and hours of talks given on the subject of public relations and its importance to milling firms, the grain industry and bakers. The topic is a many sided one. It relates to the "status" of a firm in the community in which it operates, and in turn influences, to some degree, the acceptance of the products made by the company and hence its sales. "PR" is important, but is often either neglected or mishandled through inept or thoughtless acts.

Public relations does not operate as a fire department . . . to be called upon in case of emergency. Rather, it should be regarded as a preventive influence to keep emergency-type situations from developing in the community or among customers or employees.

Some firms regard "PR" as a high science, while others seem content to handle it through printed publicity. Neither viewpoint is incorrect, but neither covers the subject adequately. Actually, public relations, when boiled down to its essential elements, is the application of good common business sense to the way the company conducts its business with the public. The things done by both management and its employees mold public opinion—good or bad—about the company.

No one can go out and buy a pound, ton or yard of public relations. It is not for sale. Each organization creates its own. It must be planned. And, one must work on it to make it a success.

Here is a check list of the "raw materials" that go into making a successful public relations program.

Check each of the points listed that you can honestly answer with an unqualified "yes." Then, add up your check marks and see what the score is for the firm's present public relations. The unchecked questions will suggest possible ways in which a more successful public relations program might be developed in your company:

Civic Responsibility

——Do you belong to organizations in your community in each of these classifications — church, lodge, service club?

——Do you take an active part in at least one of these organizations of which you are a member?

——Are you a strong supporter of programs designed for the civic betterment of your community even though there is no personal gain involved?

——Do you participate in the recognized worthy charity drives in your community?

——Do you contribute your business know-how, facilities, and time to make every civic enterprise a success?

Personnel Relations

——Does your salary scale and employee benefit program compare favorably with other employers' plans in your community?

——Do you take a genuine and a sincere interest in your employees and in their problems?

——When it is necessary to discharge or lay off an employee, do you explain the situation completely to the worker?

——Do most of your advancements to better positions in your firm come from within your organization?

——Do you keep all of your employees informed about the goals, problems and position of your company all the time?

Business Correspondence

——Do you answer all letters you receive as promptly as possible?

——Do your business letters have a pleasant, friendly tone that gives a good impression of your business?

——Do you personalize your letters so that the person receiving the letter does not feel "you say that to everyone"?

——Does the physical appearance of your letters create the kind of impression you want people to have of your firm?

Telephone Technique

——When answering the telephone, do you have a "smile" in your voice?

——Do you introduce yourself and give your firm identification when answering the telephone?

——Do you make it a point to get your caller's name when you start talking on the telephone?

——Do you personalize your telephone conversation by using the caller's name while talking?

Creditor Relations

——Do you pay all invoices as promptly as possible within the dating allowed?

——Do you take only the discounts allowed on the invoice instead of mis-interpreting the terms or datings?

——Are you fair in seeking credits and adjustments for supplies and equipment you buy?

——Do you recheck carefully on any errors that seem to indicate a difference in invoice amount and the quantity received?

——When it is necessary to delay payment of an invoice for some

reason, do you inform the vendor of the situation?

Advertising Attitude

——Do you know the publisher or editor of your local newspaper personally?

——Do you keep your newspaper informed of any personal or business activity that is newsworthy?

——Do you avoid the tendency to be a "publicity grabber" for any little thing that happens?

——Do you refrain from complaining about the amount of publicity you receive in comparison with other businessmen?

——Do you give the commonplace publicity about your firm a different twist to make it more interesting?

Handling Complaints

——Do you make every effort to handle all complaints and adjustments promptly?

——Do you try to be fair in all settlements offered to your customers about their complaints?

——When you are at fault, do you quickly shoulder the blame instead of grudgingly making an adjustment for the customer?

——Do you live up to the spirit as well as the letter of all agreements you make with your customers?

——When dealing with a "chronic complainer" are you fair, but firm?

School Relations

——Do you have special arrangements made with local school officials to handle speaking assignments on your industry?

——Have you considered a special scholarship for outstanding students to give your organization better recognition with parents and students?

——Have plans been made for handling tours of your plant for interested school groups?

——Do you know and inform local school people about films on your industry that are available?

——Do you encourage your employees to take advantage of the special evening instruction offered by local schools?

Credit Accounts

——Do you explain all your rules and regulations about your credit plan to your customers when the account is opened?

——Do you handle poor credit risks in a tactful manner to avoid possible ill will with other customers?

——When following-up over-due accounts, do you have a system that tries to hold the good will of these slow paying customers?

——Do you give your customers every opportunity to make some plan of settlement before taking drastic action on your accounts?

Printed Publicity

——Do all of your advertisements fit into the character you want to create for your business?

——Are your advertisements prepared in good taste to give people a feeling of confidence in your products?

——Do you avoid the tendency to knock your competition in your advertising?

——Do all of your advertisements have some means of identification for your business?

——Do you avoid any misleading or semi-true advertising that could be a business boomerang?

The above questions give a cross-section of the firm's public relations program. All are important to the future success of one's business and all have a bearing on the opinion the public will have of the company. By applying good common business sense to any areas that show a weakness, public relations in the community can be improved noticeably. «

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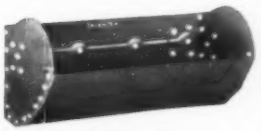
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LETTER TO THE EDITOR

Russian Reply - - -

To a Visitor's Impressions Regarding the Soviet Union

FROM: DR. NATALIA KOZMINA
All-Union Scientific Research Institute of Cereals
11, Dmitrovskoye chaussee
Moscow A-8, U.S.S.R.

Russia Through The Looking Glass

By GORDON GROSH

A fresh approach—everyone seeks it of visitors to Russia. Mr. Grosh, with a keen eye and a superb scholastic background in cereal chemistry, has written his article with this approach in mind. A Canadian, he comes of a milling family, making him alert to Soviet techniques in that field. But he does more; his report deals with the people and their activities. Mr. Grosh has been working on his doctorate in cereal chemistry at Kansas State University, but at this time still is in Europe. In addition to Russia, he has visited Switzerland, Austria, Italy and West Germany, where he spent time at the Cereal Research Institute. Mr. Grosh will [illegible]

Some time ago we received a letter from Mr. D. Anderson, director of the Canadian Cereal Research Laboratory, from which we were glad to learn that a representative of this laboratory, Dr. I. Glinka, will be our guest this summer as a delegate to the International Biochemical Congress in Moscow. There is nothing extraordinary in this fact, but I was reminded by it of a certain article in your esteemed journal, to which I had intended to reply a long time ago. Unfortunately, pressure of work prevented me from doing so.

I would not have returned to it again had the American press not continued to carry articles in which the false assertions made in your journal were repeated in one form or another. When referring to the material published in THE Northwestern MILLER, I am thinking of an article by Mr. Grosh, headed "Russia Through the Looking Glass" printed last October.

"The Russians are sealed off from the outside world." This is one of the assertions made in the article. And I want to ask you whether it tallies with the organization of such a representative forum of scientists as the International Biochemical Congress in Moscow on the initiative of the U.S.S.R.

Does it tally with the undeniable fact that Soviet people, Soviet scientists travel to many countries of the world, becoming informed about the life, science and art there? Our scientists make regular trips to the U.S., Britain, France, the F.R.G., Austria, and other countries, where they visit research institutes, meet their foreign colleagues, and read papers at conferences and congresses. Let me remind you of the fact that last spring a delegation of Soviet cereal experts visited the U.S.

The Soviet Union is a member of the International Society of Cereal Chemistry, and some of our Institute staff are members of the executive committee and the technical committee of this society. We attend its congresses and the sessions of its executive committee, and our papers are published in the society's transactions.

Wide Readership

We receive a large number of scientific magazines and books from all countries, read them systematically, and the most valuable articles are translated into Russian and published in large editions.

We also welcome guests from foreign countries every year. Scientists from other countries often come to our institute where they are given all opportunities to learn about our researches. For instance, at the end of last year we welcomed two American colleagues, Mr. Lawrence Zeleny and Mr. Eugene Alsop, who were members of a delegation of American cereal experts paying a return visit to the U.S.S.R.

The Soviet Union has dozens of institutes like ours. And each of them conducts no less intensive research, accompanied with exchange of scientific information, delegations and literature with foreign countries. So we see that it is quite clear that the statement on the Soviet people's limited knowledge of life abroad is perfectly absurd.

Further, the author tries to assure his readers that the situation in the agriculture of the Soviet Union is far from ideal, that "collectivization has not helped agriculture." This corresponds with the assertions of a number of American newspapers about a "crisis" in our agricultural production. Is it true? Of course not.

In spite of the fact that the collective farms and state farms suffered great material damages from the Hitlerite invasion, the agriculture of the U.S.S.R. was rapidly restored in the post-war period and made great progress. The rates of its development, however, could not keep up with the growing demands of the country. Therefore, in 1953, the Communist Party introduced a number of measures to accelerate the development of agricultural production. Since then agriculture has progressed rapidly and steadily. Here are the facts: In 1953 the U.S.S.R. produced 5,000 million poods* of grain. In 1954-58 the average annual grain yield rose to 6,900 million poods, and in 1959-60 to 8,131 million poods.

Other Increases

Meat production, as compared with 1953, increased to 132.7% in 1958, and to 151.7% in 1959-60. The milk yield for the same period rose from 36,600,000 tons to 61,538,000 tons. Never before had the Soviet Union known such rates of development of agricultural production.

The collective farm system has proved its vitality. It is another thing that the output of agricultural prod-

*One pood equals 36 lb.

ABOUT THE AUTHOR

Dr. Kozmina is a distinguished Soviet scientist and head of the All-Union Scientific Research Institute of Cereals, Moscow. She is also the daughter of the late Peter Kozmin, internationally famous writer on flour milling technology.

ucts, meat and milk in particular, lagged behind the growth of industrial output and, chiefly, the demands of the population during the past two years. These demands have grown considerably thanks to the increase in the incomes of the working people.

The decisions of the plenary meeting of the Party Central Committee, held in January 1961, are intended to do away with this lag. The plenary meeting was attended not only by leaders of the party and the state, but also by rank-and-file collective farmers, workers of state farms, agronomists, engineers, and scientists. They revealed and sharply criticized mistakes and shortcomings of the local party, government, and planning organs, as well as of the Ministry of Agriculture, in the management of the collective farms and state farms.

Incidentally, in the light of the work of the plenary meeting how groundless are Mr. Grosh's assertions to the effect that criticism in the U.S.S.R. "is socially and politically undesirable." On the contrary, in Soviet society, frank and open criticism is a long-tried and effective method of struggle for success, for the correction of mistakes and shortcomings.

In the interests of steadily raising the people's well-being, the plenary meeting of the Central Committee adopted a program for further increasing agricultural production in the U.S.S.R. It suffices to say that grain procurements are to be brought up to 4,200 million poods in the next few years, whereas the plan originally called for 3,600 million poods in 1965; similarly, meat procurements are to reach 13 million tons instead of 11 million, and milk 50 million instead of 40 million tons.

Fixing these new targets, the Party outlined in great detail how they were to be attained, how the progress of the collective farms was to be accelerated. This program was hailed with enthusiasm by all Soviet people, and there is no doubt that they will achieve the targets set by the Party.

Soviet cereal chemists have also considerable achievements to their credit. Their researches help to solve complicated problems confronting agriculture.

A characteristic example is the extensive introduction of the method of forced ventilation of grain in the granaries. The construction of ventilation units was preceded by the elaboration of the theory of the movement of air in the grain masses. This work was carried out in the Moscow Institute of Cereals, of which I have the honor to be in charge. This research made it possible to equip a large number of granaries with such units in a short period of time. At present, our institute is working on the further improvement of the methods of ventilating grain, using both hot and cold air, and on the construction of new units.

The second example is the study of the milling process—a study intended to rationalize flour production. For a number of years we studied theoretically the micro- and sub-microstructure of the endosperm, its physical properties, and the processes of grain grinding, applying new methods of research. As a result, we succeeded in drawing up a theory of grain milling which enabled us to suggest a number of progressive measures to the industry, enhancing efficiency of the mills.

Another interesting research on which our institute is now engaged is the study of the thermophysical constants of grain, and the processes occurring during the drying of each kernel as well as of the whole grain layer. This work is being conducted with a view to designing highly efficient grain dryers for Siberia and Kazakhstan.

General Plan

The considerable successes in grain production of recent years have confronted scientists with a number of new problems, on which we are now working. Of course, one institute alone is not sufficient for this. A general plan has been drawn up for a number of years, in the fulfilment of which many research establishments will participate. Such planning helps to rapidly obtain the data needed for the further development of the industry.

Naturally, we also have our difficulties and shortcomings. But our achievements, like the achievements of the whole of Soviet agriculture, are undeniable. And they cannot be refuted by any fables about "crises."

I could prove the futility of a number of other statements made by Mr. Grosh, in particular his fantastic assertion that in Moscow supposedly "houses without running water or toilets are quite prevalent" (?!). But the above facts suffice to show the error of many assertions made by Mr. Grosh and similar experts who tell stories about Soviet agriculture in the American press. To be just, however, I must say that not everything in his article is incorrect. But this only makes the above-cited tendentious, biased assertions all the more regrettable, for objectivity should be one of the main properties of a scientist.

I hope, Mr. Editor, that you will publish this open letter in your magazine. «

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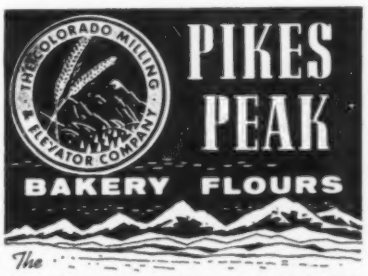

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MEN GOING PLACES

Frontier Chemical Co., Wichita, Kansas, has added **Burton A. Burquest** to its staff. He will direct Frontier's technical service and field research program for liquid grain fumigants, bringing to the job his extensive experience in the grain and milling industry, reports **Melvin E. Clark**, vice president of marketing. Mr. Burquest was associated with the Pillsbury Co. almost 15 years, working in the grain and economic biology departments, where he directed laboratory operations for contaminant determination of cereal products and X-ray analysis of grain. Fumigation of mills and grain storage facilities for Pillsbury also came within his area of responsibility.

Burton A. Burquest

●

Stockholders of Southern Bakeries Co., Atlanta, have named **Clarence M. Gay**, Orlando, Fla., to their board of directors. The new director is president and a director of the Citizens National Bank of Orlando, has interests in five other Florida banks, and a broad background of public service, reports **Ogden A. Geilfuss**, Southern's president. Mr. Gay was comptroller of the state of Florida from 1946 to 1956. Upon returning to private business, he was awarded a citation from the Florida legislature, the only state official to be so honored to that time.

●

Walter Starr

Walter J. Starr has been appointed to assume the responsibilities of sales manager of flour for the Beardstown Mills Co. of Beardstown, Ill. Mr. Starr has a background as a management consultant, and formerly was associated with the eastern division of International Milling Co. He brings to Beardstown Mills a lengthy and varied background in the flour milling industry. For the present, Mr. Starr will continue to maintain his headquarters in the East.

●

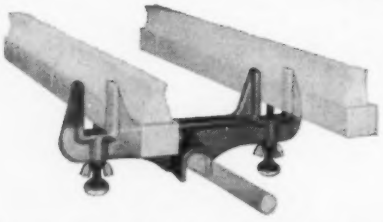
A senior student in the department of baking science management at Florida State University, Tallahassee, has proved himself by winning a graduate assistantship at the University of Minnesota. He is **M. P. Burkwall, Jr.**, who will serve as an assistant in the U. of M.'s department of agricultural biochemistry, at the same time earning graduate credit toward M.A. and Ph.D. degrees in biochemistry. He is originally from Beaumont, Texas, and will be graduated from Florida State with a double major in chemical science and baking science and management. While at FSU he has worked as a research assistant in the baking science department. During school terms he has been employed variously by Rainbo Baking Co., Beaumont, and Campbell Taggart Associated Bakeries, Inc., Dallas, Texas.

M. P. Burkwall

●

Donald S. Cordy becomes regional bread sales supervisor in the northern California and northern region of Continental Baking Co. He moves up from the position of sales manager at Continental's Sacramento, Cal., bread

AUTOMATIC ROLL BRUSH HOLDERS



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bakery, and will headquarter at Redwood City, Cal., states **R. Newton Laughlin**, company president.

●

The new Patco products division of C. J. Patterson Co., set up to handle marketing and distribution of special products to the baking industry and allied businesses, will be managed by **Robert C. Becker**. For the past eight years Mr. Becker has served as Patterson's director of purchasing. He joined the firm in 1950, after serveral years with the Pillsbury Co. The newly created sales division will handle marketing and distribution of such special products as a dough conditioner recently authorized by the U.S. Food & Drug Administration, a malt supplement, and an electronic instrument for mixing control.

R. C. Becker

●

Ross Machine & Mill Supply, Inc., Oklahoma City, Okla., has appointed **Rex Hubbard** as sales manager. Mr. Hubbard comes from Strong-Scott Manufacturing Co. of Minneapolis. He was district manager of Strong-Scott's office at Kansas City. Mr. Hubbard is a graduate of Kansas State University, where he studied flour milling. Prior to joining Strong-Scott he was associated with the corn milling division of General Foods Corp. and the Coleman Co. of Wichita, Kansas. Announcement of his appointment was made by **Henry Stark**, executive vice president and general manager of Ross Machine & Mill Supply. «

Rex Hubbard

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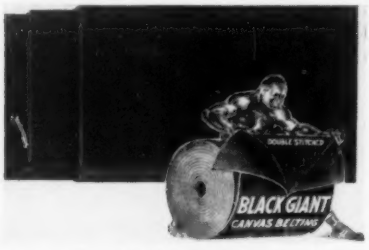
Grain Cleaner

The Clute Corp. is offering a fact sheet describing its Clute grain cleaner. The brochure describes the Clute air separator, said to be one of the first patented machines to utilize air efficiently to separate particles of differing size, shape and density. A cutaway diagram illustrates the complete pneumatic grain cleaning process accomplished by the grain cleaner's three basic parts: The cleaning leg which performs the first separation of particles of different density; a fan which sucks air through the system; and a cyclone with no moving parts which removes the separated material. Photographs show the Clute mobile grain cleaner attached by conventional means to auto or truck for transporting to job site where it is easily positioned for safe operation.

Circle No. 4842
on Reply Form for Details

Conveyor Belting

Corns Conveyor Belt Co., now a division of Pioneer Belting & Conveyor Equipment Corp., has released information on a number of its types of conveyor belting. These products, developed by the Corns firm over the years, will continue to be manufactured. A chief item still available is the Black Giant belt, particularly suited for conveying grains of all



types, in addition to other products, because of its high resistance to abrasive material. The company states that the Black Giant belt is virtually one belt within another, double stitched for strength and lasting quality. The inner plies are sewn separately, after which the outer belt is attached, with a seam in the center, producing a belt with two round edges. A unique feature claimed for Black Giant belting is the compound with which it is treated. This is not a liquid, but a combination of gums which the manufacturer states will not soak into the belt, but which have to be forced in by a mechanical process. The compound is said to add strength to the finished belt and will not harden, at the same time retaining pliability, giving greater traction power, and permitting looser running without slippage. The firm also claims that this treatment presents a smoother surface to the face of the pulley than conventional belting. Other types of belting available from the Corns line are "Rubber-ite," the "Strong-Hold," and the "Eureka."

Circle No. 4843
on Reply Form for Details

Patented Dispenser

Pope Testing Laboratories is marketing a patented dispenser which, with one pull of a lever, measures out an accurate amount of catalyst and potassium sulphate. The dispenser should be of interest in laboratories where the Kjeldahl nitrogen determination test is used. A micrometer adjustment on the dispenser permits it to be preset for quick, accurate discharge. The dispenser can be purchased, or it will be offered as a free premium with purchase of a specific amount of prepared Kjeldahl mixture from the Pope firm. The mixtures, mechanically blended to give free-flowing, uniform consistency, can be purchased in standard A.O.A.C. formulas or in special mixes to meet specific requirements.

Circle No. 4844
on Reply Form for Details

Clean-Flo Conveyor

Duplex Mill & Manufacturing Co. has introduced its Kelly Duplex Clean-Flo conveyor, a fully-enclosed, self-cleaning machine designed to convey all types of granular, free-flowing material smoothly and uniformly along either a horizontal or an inclined path. The bed consists of a single strand combination chain on which one-piece, trough-shaped, nonmetallic flights are spaced at even intervals to keep the trough wiped clean at all times. The conveyor is constructed of arc welded steel throughout, is said to require little maintenance, and has a low horsepower-to-capacity ratio. The firm claims that it will not choke and that it keeps degradation to a minimum. It can be built in any length with 6-, 9-, 12-,

14-, 16-, 18-, 20- or 24-in. wide trough. The conveyor can have any number of intermediate discharges and can be equipped with any one of three different drive arrangements, states the company.

Circle No. 4845
on Reply Form for Details

Folder on Couplings

A six-page folder, No. 2975, is available from Link-Belt Co. Titled "Type MC Geared Flexible Motor Couplings," it brings together all pertinent data on Link-Belt motor couplings, including features now added to the line. These features are a corrosive duty cover with exceptional resistance to acid, alkalines and solvents; a space adapter that speeds and eases maintenance of coupling; driven pumps and compressors by permitting installation with an access gap between shaft ends; and a larger size added to the line that now extends the application range of the couplings to a 2⅝ in. bore size. MC couplings described are designed specifically for use as motor couplings for transmitting power to pumps, compressors, generators, speed reducers and similar applications.

Circle No. 4846
on Reply Form for Details

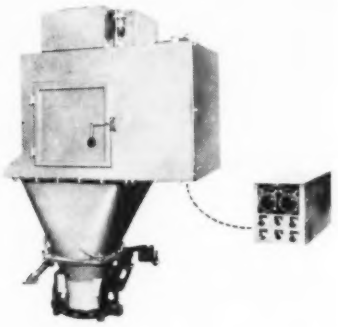
'Speedweigh' Brochure

A four-page, color brochure describing advantages of the New Model 3012 Speedweigh Scale, is being offered by Toledo Scale Division of Toledo Scale Corp. The brochure contains illustrations of this new five-pound capacity net weight packing scale which is designed for check-weighing, filling, issuing predetermined quantities and count-by-weight operations. Commodity equipment offered and pertinent scale specifications are fully enumerated.

Circle No. 4847
on Reply Form for Details

Bagging Device

A device said to speed beam response leading to faster feed cutoff, in automatic bagging, is offered by Richardson Scale Co. The scale is the "Speedac E-50" and weighs up to 24 50-lb. bags per minute of free-flowing materials. Richardson states that even with sluggish materials the Speedac E-50 weighs 16 50-lb. bags per min-



ute with consistent accuracy. Accuracy capability reaches 2 sigma 1 ounce. Speedac unit components are said to be friction free, wear proof, and dust proof. They have no contact with the scale beam, and will provide unlimited trouble-free life, claims Richardson. The company considers the new unit a break-through in the techniques of high performance automatic bagging.

Circle No. 4848
on Reply Form for Details

Portable Bag Closer

The Dave Fischbein Co. is offering a portable bag closer said to have greater capacity and adaptability to a wider range of bag closing applications than previous models. The Model D is said to emphasize simplicity of operation and can be used efficiently even by inexperienced operators to close all types and thicknesses of textile and paper bags. The Model D closer can be used as a completely portable unit, or in one position with specially designed Fischbein suspension units.

Circle No. 4849
on Reply Form for Details

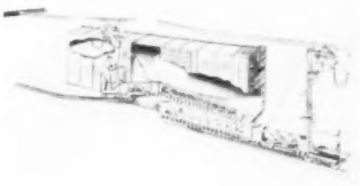
Grain Charts

Seedburo Equipment Co. is making available new charts for all models of Steinlite moisture testers. The charts are 500-RC, 400-G, 105-S and 105-D for soft red winter wheat or soft white wheat (eastern production) and hard red winter wheat. A new chart also has been calibrated for the Model 500-RC only for white wheat (western production).

Circle No. 4850
on Reply Form for Details

Grain Unloading

Andrews Machine Co. has introduced a method of unloading grain from boxcars utilizing what it calls an "Augermobile." In the system a moving double-screw pivots on a hinge to reach blind corners of a car. Because it goes right in to get the grain, complex systems for tipping or rocking the car are eliminated, states the manufacturer. The "Augermobile" is said to be simple in operation, and to produce high capacity unloading at costs below more complicated systems. The company states that one man only is necessary to operate the



entire system, cutting labor costs. When operated by one man, the "Augermobile" is said to completely unload an 1,800 bu. car in 17 min. Two men working simultaneously on opposite sides of the car can cut the time to nine minutes, it is claimed. Installation is said to require only a minimum of space and to be so simple that it can normally be handled by regular maintenance employees.

Circle No. 4851
on Reply Form for Details

Bag Closure

The Bemis Strip-closure, a quick-opening closure for sewn, open-mouth and sewn valve multiwall paper bags, has been developed by Bemis Bro. Bag Co. It is now available throughout the U.S. except in certain parts of the East and the West Coast. The Bemis Strip-closure, identified by a red tab at the seam, has proven completely effective in withstanding ordinary stretch and breakage and product sifting at the seam, says the

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company. It is reported to offer protection at the bag seam equal to present methods of closing sewn bags.

Bemis claims the strip-tab is simple to open, coming loose from the seam with a gentle pull as simply as opening a cigaret package, and without contamination of product from loose threads. The clean opening also permits re-use of the bag, which can be opened partially, to form a filling spout, or opened completely.

Circle No. 4852
on Reply Form for Details

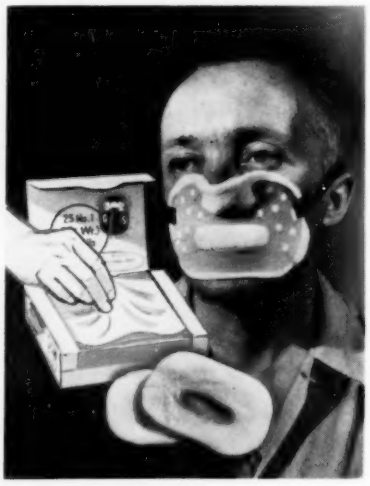
Reference Data, Tables

A handy collection of reference data and tables has been published by Pulverizing Machinery Co. for calculations relating to the use of pulverizing, air conveying and dust collecting equipment. The 24-page booklet includes conversion equivalents, weights and measures, psychometric charts and many other data useful to engineers and others concerned with installation or operation of air conveying and dust collecting equipment. The reference booklet, Bulletin 55B-1, may be obtained upon request.

Circle No. 4853
on Reply Form for Details

Light-Weight Dust Mask

General Scientific Equipment Co. is now offering its Filtairettes, lightweight dust masks, in refill packages and a self-dispensing container. The container reportedly allows easy, quick removal, one at a time, of the refills without touching any but the filter being put into use. The Filtairette protective masks weigh ½ oz. each, are pliable and designed to fit the contour of any shape of face. The company claims maximum comfort to the wearer. The protective masks also can be worn with glasses or goggles. The company claims that the masks cause no breathing difficulties, and that they allow more air to get through, at the same time trapping more than 400 different varieties of non-toxic dust, and eliminating spray hazards.



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Recording Dry Feeder

A proven volumetric chemical feeder adapted for loss-of-weight recording has been released by Wallace & Tiernan, Inc. The scale-mounted Series A-690 Feeder with loss-of-weight recorder controls dry chemical flow precisely and provides permanent records of feeder operation. Feeder design is said to assure uniform delivery at rates between 0.0045 and 2.8 cu. ft. per hour. A screw-type feed section prevents flooding. Built-in diaphragm agitators prevent arching of material in the hopper. For convenience, an adjustable knob controls feed rate. A flashing light indicates proper operation. The amount of chemical fed during any desired period is read from 24-hr. or 7-day charts. A direct-reading register shows the amount of material remaining in the hopper at any time. To indicate hopper depletion, a visual alarm is provided. «

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The Role of the Miller

Is it the same today as it has been down through the years? Or has the impact of modernization affected milling as it has practically all other industries?

By DEWEY H. ROBBINS

THE object of my talk is to discuss the role of the miller in terms of the responsibilities of his assignment; what should the position of the miller be in the company's organization; what are some of the areas in which the miller may show a tendency to weakness; and, finally, what are some of the things we, as millers, should do to improve effectiveness in our assignment.

As production manager, he has a number of responsibilities, including those of production and production cost, and for quality control of the finished product as it is affected by milling operations. To carry out this assignment efficiently requires knowledge and skills not only in the basic assignment—that of operating miller, but also knowledge, skills and participation in practically every phase and level of management within his organization. The miller who cannot—or does not—assume these broader responsibilities limits his effectiveness and opportunity for advancement within his organization.

Far More Required

Therefore, it is not enough to be a highly skilled and experienced operating miller; to be an artist at balancing a mill; to thoroughly understand mill flow and all the other highly developed skills associated with operative milling. No! it takes far more than this to be a successful miller today. These skills are important, of course. But to be a successful production manager requires knowledge and skills in many other fields—management, sales, distribution, cereal chemistry, industrial relations, purchasing, cost control, material handling, engineering, maintenance, to name a few. The miller who limits himself to the purely operative level will remain there throughout his career.

To what extent, then, should we be skilled in some of these other fields to successfully accomplish our job as millers?

Certainly, we are not expected to be experts in the field of sales and distribution. But we can, and we must, be able to advise sales when it makes demands on production that are impossible to carry out without financial loss to the company. Admittedly, we cannot do this without some considerable knowledge of sales and sales problems. Certainly we must understand the over-all picture and, most important of all, we must have a synthetic appreciation of sales' problems.

By the same token, we are not expected to be experts in the field of cereal chemistry, but we must be qualified to advise product control when it makes specifications which are inconsistent with good milling practices.

But remember, we cannot take such action without a broad knowledge of and a contact with the over-all picture, nor without a recognized voice in management equal to that of the other major divisions. We will not be given this voice unless we are able to convince top management that we have the necessary qualifications and that it is essential in the interest of efficient plant operations.

Allow me to confine my remarks to those broad phases of management that fall outside the limited range of operative milling. I will discuss what some of our qualifications should be and will mention some of the areas in management in which we should take an active part.

First of all, management is a highly developed science. Volumes have been written on the subject and colleges and universities give courses leading to degrees in management. It, therefore, is not an inherited characteristic, but one that must be acquired by hard work, study and experience. Fortunately, the principles are simple and easy to understand and apply.

Delegate Responsibility

Certain of these principles must become a part of our daily performance. For example, we must thoroughly understand and follow the unity of command, or the one-boss principle, and we must be able to delegate responsibility and authority. The inability to delegate has held back more men in their advancement and usefulness than has any other single known factor. The operating miller who cannot bring himself to delegate some of his

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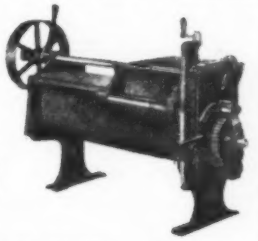

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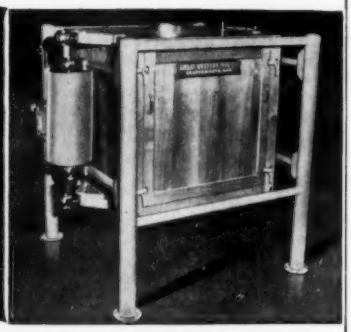
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responsibility never will get very far in his profession. Certainly he never will find time to be very effective in managerial functions.

So, if we are to make ourselves available for higher responsibilities, then we must train to be effective in motivating and training subordinates to take over certain routine functions. Our responsibilities are such that it is essential to have adequate, competent assistance within our own division.

Of equal importance, we must train ourselves to cooperate and coordinate at all levels, both horizontally and vertically. We must be as effective in dealing with those above us as with those below us. It is not necessary to be a "hail fellow, well met" to be effective here—we need just know and apply the correct principles.

We must have a thorough knowledge of company organization and over-all policy. We must know and properly evaluate the position of the production division in relation to other major divisions of the operations.

Perhaps the most difficult element to cope with in any organization is the relationship and differences between the line and the staff's functions. By definition, a staff department is a service department. Its function is to provide a service, give advice, and otherwise aid the line of production departments.

No 'Command' Authority

A staff organization does not have command authority, and, yet, within the milling industry, two extremely important functions—product control and industrial relations—are performed by staff departments, which in many instances, do exercise command authority. Here, to some extent, we have permitted two of the most important elements in our jobs, the selection and use of raw materials and the selection and use of personnel, to be virtually removed from our control—two areas in which the miller could—and should—contribute valuable knowledge and experience.

Why has this sort of thing developed? There are a number of reasons. Let us review a few of them.

If we go back a few years to the time when there were many small, independent flour mills throughout the country, we find that the head miller of that day was the man-of-the-hour. He exercised complete control over op-

Examining the role of the miller from the point of view expressed by Mr. Robbins brings out two important facts: First, being a manager, the miller's success as a manager largely determines his success as a miller; second, the miller's role has changed tremendously in recent years. Demands in managerial skills and in technical and engineering qualifications are far greater than they were a few years ago. Mr. Robbins is with Fisher Flouring Mills Co., Seattle. His paper was delivered in Minneapolis May 24 before the 65th annual technical conference and trade show of the Association of Operative Millers.

erations. He selected and blended his own wheat mixes, and he worked out and maintained his own quality specifications. His was largely a family business, and in many instances he had personal contact with his customers. He investigated their complaints and took whatever corrective measures seemed necessary.

There were no unions. The miller exercised complete, unrestricted control over his laborers. Training and training programs, as we think of them today, were unknown. If a good miller came along, the head miller hired and placed him as desired, without regard to what we now know as seniority. If, in the opinion of the head miller, a worker performed unsatisfactorily, he simply was fired. No further investigation followed.

Some larger, more progressive mills had laboratories and chemists. But here also the head miller exercised absolute control. Samples of flour sometimes were sent to Howard's Laboratories in Minneapolis as a check on the mill chemist. Some of you may recall those large, expansion type loaves of bread that were baked by Howard in those days.

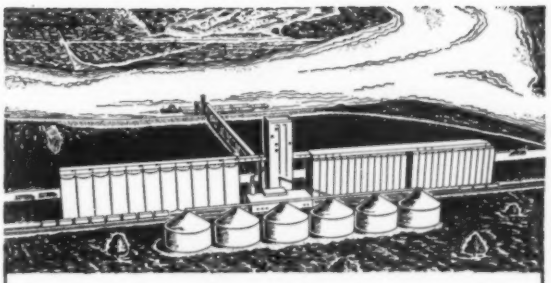
All of this has changed, and some of the changes came about rather rapidly. The small mills are gone, and so is the old-time head miller. In their place we have the large, centrally controlled mills and the plant superintendents.

Highly Specialized

The business has become highly specialized and largely a bakery business. The large, modern bakery makes demands on quality and uniformity unknown in the old days. Unions have come into the picture. Labor control has become a major problem. Training and other specialized programs have become a necessity. Highly competitive conditions have placed greater emphasis on management and cost controls. Specialization and departmentalization is the order of the day.

It was these changes that ushered in the products control department and the industrial relations department. They became, in most instances, staff organizations reporting directly to top management. On the whole, this was necessary and good for the industry, but some problems developed and to some extent still exist. For example, the average cereal chemist was not a miller, and the average industrial relations director not an experienced supervisor; and, as a consequence, quality specifications were not always practical and working rules not always workable.

For the most part, the miller was caught unprepared to cope with all the rapid changes and technical advancements that took place. But, regardless of this, no single individual can possibly find time to take care of all the technical and personnel functions in a modern operation



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Role of the Miller (continued)

—staff assistance is essential. All this has tended to make the miller's job somewhat more limited in scope and, at the same time, more highly specialized. As a consequence, management may well have lost some valuable contributions formerly received from the miller.

I think we can say, with some pride, that the modern miller has met the challenge. The qualification factor, as such, has been taken care of pretty well. The average miller today is, technically, a well-educated man, potentially competent to assume any level of managerial responsibility. In most cases, however, he may need some contact with, and perhaps some training in, certain phases of the operation before he can contribute his many potentials to managerial problem solving. But, let me hasten to add, responsibility for getting this additional training, and the responsibility for getting proper recognition, rests with the individual miller, not with someone else.

We do not have time to discuss all the various areas—or, for that matter, even to go into the details of any particular one of them, in which the miller should take an active part. Certainly the most important one is that extremely complex area where decisions on sales, raw materials, specifications, production costs and distribution are reconciled. It involves all the complex elements in sales and sales projection, customer relations, quality requirements, availability and cost of raw material, conversion, production and production planning, distribution and, directly or indirectly, most of the other elements in the operation of a flour mill.

BE AS PROUD OF YOUR JOB
AS WE ARE OF OURS, *for*
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It involves grain procurement, with all its associated problems, such as availability, potential supply, delivery and storage problems, varietal and quality price differentials, transit, transportation, etc.

It involves designing a product that will have the specification and quality factors demanded by the customers, and at the same time be a product which can be manufactured from the raw material available, at a production cost consistent with the selling cost. Other costs, such as container, packing, loading and shipping sometimes become an important element in special orders. Production costs, as influenced by yield and production planning and scheduling, are a very definite part of the picture.

The last two elements—yield and production planning—are two of the most important elements in production cost. Since production cost is a direct responsibility of the miller, it is essential that he take a very positive and active part in this area. If a product design is based on a yield cost that cannot be obtained because of the milling characteristics of the wheat, or if the quality specifications are such that the miller is confident they are out-of-line with good milling practices, then it is his responsibility to make those facts known. If the production planning schedule is such as to cause high production cost because of too many product changes or because of a radical fluctuation in the use of manpower, then the miller is responsible for taking action in this area also. In fact, his decision in these two areas should be virtually final, subject only to a veto by top management.

But, before we insist on having the privilege of such action, we had better make certain that we have the necessary technical qualifications, that we are sufficiently familiar with sales, grain purchasing and other related problems, and that we have all the facts in each particular instance. It is a sizeable assignment; it takes a lot of hard work and constant attention; but it is, nevertheless, part of our responsibilities.

Some Complications

Sure, there are some complications to this broader aspect of our job. For example, requirements of the miller's primary job are complicated and confining, requiring a great deal of personal attention. This is true even though we are able to delegate many of our routine operations to others—there still remains a sizeable amount of work which requires our personal attention. Moreover, much of a miller's work is technical and not understood by the average mill executive. It is difficult for the executive to understand the proper relationship and balance between production and other problems in flour mill operation. For some reason or other, flour mill executives, who usually are geniuses in finance, sales and grain marketing, tend to be all "thumbs" when it comes to technical problems of operational milling.

The flour mill office often is some distance from the plant—sometimes even in another city. This complicates communications and contact. Sales, grain purchasing and even production planning usually occur in the main office, not always conveniently accessible to the miller. Nevertheless, it is our responsibility to make ourselves available to enter into any and every phase of management in which we can—and should—make a substantial contribution.

Another area in which we must take an active part is in industrial relations. Not in procurement, training, services, that sort of thing, but in negotiations that have to do with working rules, job classifications, etc. We are in the best position of anyone within the organization to know what is needed in this area. We, therefore, must take an active part in this type of negotiation.

I have mentioned two or three internal managerial

activities in which the successful miller must take an active part. There also are some outside activities in which it is equally important for him to participate. For example, our own Association of Operative Millers.

Here we have an internationally recognized milling organization, designed and operated exclusively for the benefits of the miller. And, yet, how many millers do we know who do not even belong to AOM? Just look what they are missing! Its prestige, its bulletin service, the benefits of association and the opportunity to discuss mutual problems with other millers! You hardly would expect a miller to advance very far within his own company if he is not alert enough to recognize the benefits of AOM and to belong and take an active part in some of its activities.

The miller should take an interest in activities of the American Association of Cereal Chemists, keeping alert to the work it is doing through association and contact with its members and by reading its publications.

Be Active, Participate

The miller should take an active and participating part in one or more of the various grain improvement programs so successfully carried on by agricultural colleges, milling and other organizations. The miller who does not keep up with what is being developed in these programs will have a very weak voice when quality control problems, as influenced by wheat quality, are being discussed in his own organization.

Every successful miller must have a broad knowledge and understanding of flour characteristics and the types and quality requirements of his various customers, particularly those of the baking industry. He must keep abreast of the many developments and needs in this industry.

The miller must take an active part in running down, analyzing and correcting customer complaints, especially those which may have been influenced by factors such as yield, length of patent, treatments, etc., in the milling process. He cannot do this and all the other things required of him unless his activities and contacts take him far beyond the confines of his primary assignment.

An essential qualification that one must develop is the ability to communicate effectively at all levels. We must be able to think on our feet, and to write good, convincing reports. Our reports must be factual, analytical, and well balanced. When a report covers some technical problem, then it must be written in such a way that non-technical associates get the meaning. Unless we do develop some considerable skill in the art of communication with others, then our success in any level above simple routine assignments will be limited.

The ability to communicate effectively is a skill we must acquire through hard work, training and experience. I know of no better way to get training and experience in this important field than to take an active part in our own AOM professional organization.

These duties, then, and many more constitute the role of the miller. It is a big assignment, but the job must be done. We cannot afford, therefore, to limit ourselves to a single element of our total responsibilities. If we do, someone else will take over that part of our responsibility that we have neglected or are not qualified to handle. To the extent that such is necessary, our prestige and position will be limited.

I realize full well that most millers are aware of all the points I have made here and that they carry out all this responsibility as a routine matter. I suspect, however, that there are those who do not—it is to this group that I hope what I have said here today will be of some assistance. «

Victor Zimmerman Scholarship Winners

William J. Straka, Jr., Normandy, Mo., has been named the first prize winner of the Victor Zimmerman Memorial Baking Scholarship.

The announcement was made by Julius A. Zimmerman, president, Cahokia Flour Co. of St. Louis, sponsor of the annual competition. Mr. Straka is assistant manager of Straka's Bakery.

The first prize is a $1,000 scholarship to cover costs of tuition to either the American Institute of Baking in Chicago or the William Hood Dunwoody Industrial Institute, Minneapolis, as well as transportation and living expenses while attending the specialized school.

Second and third prize winners are Paul H. Bretscher, of Imperial, Mo., production manager, bakery department, Straub's, and Robert H. Stolte, bakery manager, Bettendorf - Rapp, St. Louis.

Keynote speaker at the awards luncheon, held in St. Louis, was Dr. Robert W. English, director of education, AIB, who discussed current and future opportunities for young men in the baking profession. Dr. English presented the awards to the three winners, consisting of a bronze plaque to Mr. Straka, inscribed—"in anticipation of an outstanding career in the baking profession" — and certificates to Mr. Bretscher and to Mr. Stolte.

The Victor Zimmerman Memorial Baking Scholarship award was first established in 1957 in memory of the late Victor Zimmerman, founder of the Cahokia Flour Co. The purpose of the annual awards is to maintain the high standards of professional baking in the St. Louis area by offering young men in the industry an opportunity to learn more about their work and to increase their competence.

Judges for this year's competition were: James W. Noble, president, the Master Retail Bakers of Greater St. Louis; John Roth, president, Greater St. Louis Bakery Production Club; Walter Williams, president, St. Louis Wholesale Bakers; R. M. Inbody, assistant superintendent, Board of Education, City of St. Louis, and Lawrence F. Wood, Jr., secretary, Chamber of Commerce of Metropolitan St. Louis. «

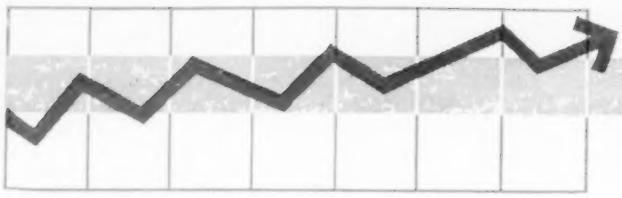
Interstate Bakeries Building Addition To General Offices

Construction has begun on a two-story, L-shaped addition to the general offices of Interstate Bakeries Corp., Kansas City. The second floor of the new wing will have 7,780 sq. ft. of space for offices of key personnel who direct bread and cake production and sales in the company's 31 plants located from coast to coast, and for the advertising department, which is being transferred from Los Angeles to the general offices.

A meeting room, 34 ft. by 17 ft., complete with built-in movie screens, turntables and other equipment utilized in sales presentations, will be part of the structure.

At the ground level will be 3,000 sq. ft. of enclosed office space and a covered area for 18 automobiles and the engineering department.

The west windows of the new wing will be protected by the use of white tile solar screen within a steel framework. Special year-round weather control will be another feature of the new addition which is scheduled for completion in the early fall. «



FLOUR PRODUCTION

A Statistical Service Provided Continuously for Readers of The Northwestern Miller for More than Half a Century.

WEEKLY FLOUR PRODUCTION, IN SACKS (CWT.)

Flour production in principal manufacturing areas by mills reporting currently to THE Northwestern MILLER with relationship of production to capacity and to the total estimated output of all mills in the U.S. expressed in percentages:

	May 7-14, 1961	*Previous week	May 8-15, 1960	May 9-16, 1959	May 10-17, 1958
Northwest	750,462	755,981	685,828	703,485	591,819
Southwest	1,334,546	1,325,939	1,315,345	1,426,783	1,179,293
Buffalo	509,318	471,232	516,188	525,386	432,507
Central and Southeast	597,140	632,236	586,669	562,628	466,882
Pacific Coast	373,026	347,830	443,623	425,845	298,878
Totals	3,564,492	3,533,218	3,547,653	3,644,127	3,968,379
Percentage of total U.S. output	74.5	74.5	75	75	75
Estimated total U.S. production	4,754,553	4,742,574			
Accumulated total this month	9,497,127	4,742,574			

*Revised.

	—Percentage of capacity operated in 5-day week—					Crop year flour production ——July 1 to——	
	May 7-14, 1961	Previous week	May 8-15, 1960	May 9-16, 1959	May 10-17, 1958	May 14, 1961	May 15, 1960
Northwest	102	103	95	105	89	33,687,397	32,532,373
Southwest	102	101	102	108	89	67,152,740	66,638,479
Buffalo	101	93	105	111	91	23,255,187	23,411,673
Central and S. E.	97	103	91	99	82	28,040,863	28,125,433
Pacific Coast	79	74	95	135	95	19,811,344	20,577,363
Totals	98	96	98	109	100	171,947,531	171,285,321

NORTHWEST

Minneapolis

	5-day week capacity	Flour output	% capacity
May 7-14	185,100	208,254	112
Previous week	185,100	*222,939	120
Year ago	194,500	193,138	99
Two years ago	231,000	215,440	93
Five-year average			95
Ten-year average			95

*Revised.

Principal interior mills in Minnesota, including Duluth, St. Paul, North Dakota, Montana and Iowa:

	5-day week capacity	Flour output	% capacity
May 7-14	548,270	542,208	99
Previous week	548,270	*533,042	97
Year ago	534,250	492,690	92
Two years ago	494,500	488,045	99
Five-year average			104
Ten-year average			95

*Revised.

CENTRAL AND SOUTHEASTERN

Mills in Illinois, Ohio, Michigan, Wisconsin, Indiana, Kentucky, North Carolina, Tennessee, Virginia, Georgia and eastern Missouri:

	5-day week capacity	Flour output	% capacity
May 7-14	612,700	597,140	97
Previous week	612,700	*632,236	103
Year ago	651,450	586,669	90
Two years ago	643,750	562,628	86
Five-year average			94
Ten-year average			87

*Revised.

SOUTHWEST

Kansas City

	5-day week capacity	Flour output	% capacity
May 7-14	297,750	192,482	64
Previous week	297,750	271,148	91
Year ago	254,250	237,845	94
Two years ago	221,750	273,790	123
Five-year average			106
Ten-year average			99

Representative Mills, Outside of Kansas City (Including Wichita and Salina)

	5-day week capacity	Flour output	% capacity
May 7-14	1,009,109	1,142,064	113
Previous week	1,009,109	*1,054,791	105
Year ago	1,067,250	1,077,500	101
Two years ago	1,068,800	1,152,993	108
Five-year average			108
Ten-year average			99

*Revised.

BUFFALO

	5-day week capacity	Flour output	% capacity
May 7-14	505,500	509,318	101
Previous week	505,500	*471,232	93
Year ago	522,000	516,188	99
Two years ago	494,500	525,386	106
Five-year average			108
Ten-year average			104

*Revised.

PACIFIC COAST

Principal Mills on the Pacific Coast

California, Oregon and Washington Mills

	5-day week capacity	Flour output	% capacity
May 7-14	471,200	373,026	79
Previous week	471,200	*347,830	74
Year ago	466,500	443,623	95
Two years ago	466,500	425,845	91
Five-year average			96
Ten-year average			89

*Revised.

DURUM PRODUCTS OUTPUT

Durum products output of mills reporting to THE Northwestern MILLER, in sacks, based on five-day week:

	5-day week capacity	Wkly. production	% of capacity
May 7-14	167,250	166,080	99
Previous week	167,250	*155,859	93
Year ago	156,500	144,470	92
			Crop year production
July 1, 1960-May 14, 1961			8,455,903
July 1, 1959-May 15, 1960			8,293,092

*Revised.

Canadian Price Adjustments

Price adjustment figures announced by the Canadian Wheat Board and in effect May 24 were as follows: To U.K. and other European destinations via Canadian and U.S. Atlantic ports, also via St. Lawrence, Churchill, Canadian and U.S. Pacific ports, 4⅝¢ bu.; to other countries, excluding U.S. and territories, from Canadian and U.S. Atlantic ports, 15⅛¢ bu.; from St. Lawrence, Churchill, Canadian and U.S. Pacific ports, 14⅝¢ bu. The above adjustment prices apply to wheat milled in Western Canada. For wheat milled in the Bayport area the rate is ½¢ bu. less, while for wheat milled in the Humberstone area and in the Toronto area the rate is 1¢ bu. less. Wheat milled in the Montreal area is 2¢ bu. less. «

Production for May 7-14 is at the left; for May 14-21 appears here

WEEKLY FLOUR PRODUCTION, IN SACKS (CWT.)

Flour production in principal manufacturing areas by mills reporting currently to THE Northwestern MILLER with relationship of production to capacity and to the total estimated output of all mills in the U.S. expressed in percentages:

	May 14-21, 1961	*Previous week	May 15-22, 1960	May 16-23, 1959	May 17-24, 1958
Northwest	651,332	750,462	705,160	731,089	721,844
Southwest	1,693,189	1,334,546	1,149,380	1,398,834	1,092,551
Buffalo	509,663	509,318	525,133	585,878	643,209
Central and Southeast	602,093	597,140	540,642	560,240	553,983
Pacific Coast	372,860	373,026	410,628	437,408	362,829
Totals	3,829,137	3,564,492	3,330,943	3,723,449	3,374,416
Percentage of total U.S. output	74.5	74.5	75	75	75
Estimated total U.S. production	5,139,781	4,784,553			
Accumulated total this month	14,636,908	9,497,127			

*Revised.

	—Percentage of capacity operated in 5-day week—					Crop year flour production ——July 1 to——	
	May 14-21, 1961	Previous week	May 15-22, 1960	May 16-23, 1959	May 17-24, 1958	May 21, 1961	May 22, 1960
Northwest	89	102	97	101	108	34,338,729	33,237,533
Southwest	130	102	87	108	83	68,845,929	67,787,859
Buffalo	101	101	101	118	135	23,764,850	23,936,806
Central and S. E.	98	97	83	89	97	28,642,956	28,666,075
Pacific Coast	79	79	88	139	115	20,184,204	20,987,991
Totals	105	98	90	103	101	175,776,668	174,616,264

NORTHWEST

Minneapolis

	5-day week capacity	Flour output	% capacity
May 14-21	185,100	190,455	103
Previous week	185,100	208,254	112
Year ago	194,500	200,472	103
Two years ago	231,000	205,083	89
Five-year average			95
Ten-year average			95

Principal interior mills in Minnesota, including Duluth, St. Paul, North Dakota, Montana and Iowa:

	5-day week capacity	Flour output	% capacity
May 14-21	548,270	460,877	84
Previous week	548,270	542,208	99
Year ago	534,250	504,160	94
Two years ago	494,500	526,006	106
Five-year average			104
Ten-year average			95

CENTRAL AND SOUTHEASTERN

Mills in Illinois, Ohio, Michigan, Wisconsin, Indiana, Kentucky, North Carolina, Tennessee, Virginia, Georgia and eastern Missouri:

	5-day week capacity	Flour output	% capacity
May 14-21	612,700	602,093	98
Previous week	612,700	597,140	97
Year ago	651,450	540,642	83
Two years ago	643,750	570,240	89
Five-year average			94
Ten-year average			87

SOUTHWEST

Kansas City

	5-day week capacity	Flour output	% capacity
May 14-21	297,750	219,696	74
Previous week	297,750	192,482	64
Year ago	254,250	219,156	86
Two years ago	221,750	262,674	118
Five-year average			106
Ten-year average			99

Representative Mills, Outside of Kansas City (Including Wichita and Salina)

	5-day week capacity	Flour output	% capacity
May 14-21	1,009,109	1,473,493	146
Previous week	1,009,109	1,142,064	113
Year ago	1,067,250	930,224	87
Two years ago	1,068,800	1,136,160	106
Five-year average			108
Ten-year average			99

BUFFALO

	5-day week capacity	Flour output	% capacity
May 14-21	505,500	509,663	101
Previous week	505,500	509,318	101
Year ago	522,000	525,133	101
Two years ago	494,500	585,878	118
Five-year average			108
Ten-year average			104

Millfeed Production

Mills in the Northwest, Southwest and at Buffalo, representing 75% of the combined flour milling capacities of those areas, reported production of 53,858 tons of millfeed for May 14-21 compared with an output of 44,904 in the corresponding week a year ago. Production for the previous week of May 7-14 was 48,954, compared to 47,503 in the corresponding week of 1960.

PACIFIC COAST

Principal Mills on the Pacific Coast

California, Oregon and Washington Mills

	5-day week capacity	Flour output	% capacity
May 14-21	471,200	372,860	79
Previous week	471,200	373,026	79
Year ago	466,500	410,628	88
Two years ago	315,000	437,408	139
Five-year average			96
Ten-year average			89

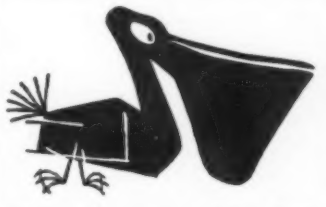
DURUM PRODUCTS OUTPUT

Durum products output of mills reporting to THE Northwestern MILLER, in sacks, based on five-day week:

	5-day week capacity	Wkly. production	% of capacity
May 14-21	167,250	165,387	99
Previous week	167,250	166,080	99
Year ago	156,500	142,104	91

	Crop year production
July 1, 1960-May 21, 1961	8,621,290
July 1, 1959-May 22, 1960	8,435,196

FILLS THE BILL



For Timely, Useful Industry Information

The MILLER

Kansas Holds a Wheat Field Day

and

Dedicates a New Mill Building

MILLERS, GRAIN MEN and bakers by the score examined the new facilities of the Department of Flour and Feed Milling Industries at Kansas State University in Manhattan May 18—taking their rightful opportunity to view the results of long preparation, planning and plain hard work.

They were not disappointed, and the K-State department, headed by the Kansas Board of Regents, showed one and all what their contributions of time, money and work have brought to the flour and feed milling industries in the way of new facilities.

New Crop Viewed

For its part, the Kansas Wheat Improvement Assn. preceded — and took part in—the dedication by holding its 17th annual field day outing, giving all segments of the industries concerned an opportunity to "see the new crop" first hand prior to attending the K-State ceremonies.

To make the entire affair official, Orville L. Freeman, secretary of agriculture, was on hand to address the dedication.

One succinct summation of the new K-State facilities, and their widespread meaning to the industries they will serve, was made by Whitley Austin, chairman of the Kansas Board of Regents, in presenting the building formally to the university. Mr. Austin termed the new K-State building "a paradox," because, like Phoenix, it arose from the ashes of a destructive fire nearly four years ago.

In turn, Mr. Austin gave credit to all who have contributed in some way to the new building and its facilities, the Kansas legislature and more than 200 firms and individuals for their contributions of machinery and equipment.

"The hope of both the state and industry is that this splendid structure will contribute to the development of American enterprise in the preparation and marketing of food products so that another paradox, that of hunger amid abundance, is resolved," said Mr. Austin. "We hope that under the stimulus of our profit-motivated economy, production and distribution may be made efficient to match the world's needs. As chairman of the board of regents, state of Kansas, I express sincere thanks and appreciation to all those who have contributed to this practical dream."

Industry Speakers

Speakers during the combined Kansas Wheat Field Day and the Kansas State dedication included, among others, Wayne Forcade, Mid-Continent Grain Co., and George Kublin, Continental Grain Co., both of Kansas City.

WAYNE FORCADE
Wheat Legislation

PREPARATION of an up-to-date discussion on wheat legislation and its effect on prices of wheat and flour is a real challenge at the present time, since the facts given today may be somewhat different tomorrow.

However, it is fairly certain that legislation enacted by Congress will embody these broad objectives:

1. Increasing farm income.
2. Reducing surpluses, when the facts are all known about what constitutes a surplus.
3. Doing the foregoing at a reduced cost for all American taxpayers, compared with previous programs.

There are, of course, other considerations. The problem is not as simple as it would appear in the three-part equation just given. After the equation has been solved, the next most important problem is to sell the solution to Congress. The points made in this discourse are based on acceptance of the equation itself as an unalterable fact.

Here are some of the complications: A solution acceptable to wheat farmers in the Southwest, for instance, might not set well in the Dakotas. Legislation reducing surpluses might delight a miller who grinds as required, provided the reduction channels his supplies into the mar-

ket place. Yet, the same ruling might affect conversely, another mill which has built storage space to hold surpluses created through previous programs.

The surplus programs, and I can think of no better name, made changes in our industry, all of it, whether grain, milling or baking. When some of us started in this ridiculously fascinating business we used to say, "Well, how simple it is. All we shall do is decide whether to sell or to buy," and not necessarily in that order. We had only to determine that the sell factor was somewhat higher than the buy factor.

End of Surpluses?

Now we are beginning to see, in my opinion, the end of the surplus program. When? Next year? Three years? Five years? Certainly no one can answer that question, but I am sure the irrevocable economic fact which many of us have seen for many years has at last caught up with the American public and the American Congress. We are simply producing through marvelously inventive technological American agriculture more than we can use or sell.

Now, when you gentlemen in baking find yourselves in this situation, you simply correct it by not buying any more flour. When United States Steel or Ford Motors or General Motors over-inventory they balance it. They cut off production. We are not forgetting, of course, support programs felt necessary because of sinking farm income were the prevailing factors resulting in our present dilemma.

All of us are interested in helping the government to correct the situation for the benefit of all concerned. Moreover, we are interested that the correction procedure allows us to participate in operating grain houses or mills or bakeries profitably. This only makes sense, of course, because without the profit feature we would not be able to produce the taxes necessary to support these or any other programs.

It is my opinion that legislation for 1962 wheat appears at this point to lean toward some mandatory acreage reduction, perhaps 10% to 20%, with some increase over this year's $1.78 average loan base price. Some have suggested 10% to 20%. This would be considered, we rumor, as an emergency piece of legislation until long term programs can be further studied, digested and recommended. Now if this thing becomes a reality, then, Mr. Baker, Mr. Miller, and Mr. Grain Man, can promulgate their plans accordingly. How much free wheat? How much storage available to house? How much of a crop? How many loaves of bread required? How much PL 480? How many dollar exports? Sift them all together and you know the answer better than anyone as to how you must operate.

Future Legislation

The Omnibus Bill? Certificate plan? Who knows? But here's a new one: I have speculated previously that in my opinion Secretary Freeman would endorse a program which would solve the three-way equation of income, surplus reduction and cost reduction, so bear with me as we look at this new piece of information. Now this is merely a very brief summation of a possible solution to the problem, and which I again repeat is pure speculation; it has not been presented in the form of a bill. Since it has not, and since it has neither number nor name, allow me to refer to it as "a wheat adjustment bill." It proposes in general to do the following:

1. To reduce price supports on wheat to somewhat approaching the world price, or otherwise tied in to a comparable price of corn which is now supported at $1.20. This converted to a wheat bushel would mean about $1.30 bu. This would be paid to all wheat farmers regardless of yield on current allotted acres.
2. To pay to this same historical producer of wheat an income adjustment, which payment would be based on the domestic requirements of the entire country, and so pro-rated to the individual farm from an approximate national usage of around 500 million bushels. On that portion of his production the producer would be paid an additional, let us say, $1 bu.
3. An additional payment known as land-adjustment for those farmers complying in the reduction of acres and to compensate them for the reduction of wheat land into land for usage of hay, grass, legumes or trees. This payment would be a flat $20 an acre. Since a wild guess for the usage of domestic and export requirements for wheat could be 1 billion bushels annually, and over a period of, say, five years it would be ideal to reduce wheat acreage to approximately 40 million, and on past historical yields this would produce a crop ideally of a billion bushels.

Now this information having been given me only today, it is impossible for me to go into any finer detail and I am presenting this to you only in a spirit of reporting, and taking for granted the figures given me, having been compiled by a reliable source, are correct.

These computations show producers are now receiving, based on current support prices and current yields, a round figure of $2 billion. Whereas the proposed program of ideally projecting a 40 million acre harvest times current yields times $1.30, plus the one-half million bushels for domestic use, times $1, plus the 18 million acre reduction times $20, to the ideal 40 million projected requirement, totals some full 8% above the $2

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IT WAS TIME TO "LOOK AROUND" during the dedication ceremonies at Kansas State University, and that's just what some of these visitors did. Left to right are, first photo: John C. Koetting, Rainbo Baking Co., Houston, and James North, Nutrena Mills, Inc., Minneapolis, pictured with Ellis English, Archer-Daniels-Midland Co., Minneapolis, president of the Millers National Federation. Center are: Fred W. Pfizenmayer, Continental Baking Co., Rye, N.Y.; Arthur G. Hessel, also of Continental's Rye headquarters, and Earl F. Cross, Colorado Milling & Elevator Co., Denver. Mr. Cross is chairman of the executive committee, Kansas Wheat Improvement Assn., the organization which sponsored events other than the dedication. At the right are George F. O'Connell, Quality Bakers of America Cooperative, Inc., New York, and Fred Hughes, St. Louis Flour Mills, St. Louis, on the special train which transported millers, bakers and grain men to and from Manhattan.

billion figure just mentioned or $2.160 billion.

Now very briefly, does this answer or otherwise solve the original equation and the one which from the point of view of the department of agriculture is the most difficult problem they presently have to solve? Does it increase farm income? Yes, assuming the figures presented to me are correct, yet, by 10% gross income it is possible to project that net income would greatly increase because of the cost factor of not seeding the acres thus retired under land adjustment payment.

Secondly, does it reduce surplus? At current rates of export it is reasonable to assume that we could reduce our surpluses at a minimum of 100 million bushels a year.

Three, does it reduce cost to the taxpayer? This is to say cost as compared with previous programs. Here again, if the cost figures supplied me are reasonably correct, it should reduce cost by some 21%.

With such sketchy information it is of course difficult for anybody to immediately analyze the proposal, but if the figures herein analyzed do solve the initial equation, then for the most part this is a beginning. Would such a program not be desirable where it would place all grain through the market place where the elimination of the subsidy would put an honest value that all could understand from every point of view on a bushel of wheat?

And equally important, would it not cause competitive farming to produce better types of wheat for the consumer's table rather than the bushels for the taxpayer's pocket? Mr. Baker, Mr. Miller, Mr. Grain Man, do you not think you could operate under such a program?

●

GEORGE KUBLIN

Crop Outlook

JUDGING FROM appearances of the Kansas wheat crop just a few weeks from harvest, the final outturn in this state and the Southwest will exceed the May estimate of the U.S. Department of Agriculture if weather conditions continue favorable. Many believe this year's crop in Kansas may approach the 300 million bushel mark, and perhaps may even establish a new record. Observers in other states of the hard winter belt are also optimistic.

At the same time, however, any analysis of supplies and the prospects for demand must still rely on the May crop report. For the fourth successive year, we will have a new all-time record wheat supply in the 1961-62 season, with the total likely to reach the figure of 2,759,000,000 bu. This includes the carryover of 1,425,000,000 bu. expected on July 1, which is a new peak—111,000,000 bu. more than a year ago. The prospective 1961 wheat harvest is 1,327,000,000 bu. made up of the May estimate of winter wheat for 1,099,000,000 and an all spring crop of 228,000,000 bu., assuming the latter yields equal to the 1956-60 average. Such an all-wheat crop would be 3% below the 1960 harvest, but 21% over the 1950-59 average. It would be the fourth largest all-wheat crop of record, while

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the winter wheat promise is the third largest.

Prospective Supply

The prospective supply for 1961-62 also includes expected imports of 7,000,000 bu., mostly seed and feed wheat from Canada.

Hard winter wheat, of course, leads. The May report points to a crop of 612,152,000 bu. for the five hard winter wheat states—Kansas, Nebraska, Oklahoma, Texas and Colorado. This is down from the 1960 harvest of 647,348,000 bu., but, as noted earlier, it would be no surprise if the final outturn this year exceeds the May 1 total. The 1950-59 average outturn in these five states was 398,663,000.

Hard winter wheat is at the core of our surplus problem. Of the record carryover of all wheat of 1,425,000,000 bu., hard winters alone account for about four-fifths. Practically all of the increase in the total carryover during 1960-61 was in hard winters, and it is likely that this will be the case again in the coming new season.

The prospective carryover of hard winter wheat this July 1 is 1,130,000,000 bu. Assuming that production this year will be the same as in 1960, or about 790,000,000, the total supply of this one class will reach 1,920,000,000 bu. Such a supply of hard winters would exceed any aggregate supply of all wheat this country ever had prior to the mid-1950's. The abundance, or adequacy, of such a supply is emphasized by the fact that the carryover of hard winters alone this July 1 will be just about equal to two and a half times average total annual disappearance in 1955-59.

New Crop Prices

What are the price prospects for new crop hard winter wheat in the light of such a huge supply? First, the supply, so far as we are concerned, is only the new crop, because practically all of the carryover will again be in the inventory of the Commodity Credit Corp. Still, the new crop prospects are such that they will more than adequately meet all prospective needs.

The dominant influence is again the price support program, and here we can draw a ready parallel with the past year because it is likely that the terminal and county support rates for the 1961 wheat crop (except for minor parity advance) will be practically the same as for 1960, unless a last-minute advance is ordered by the new administration. With no such advance, the gross loan rate for No. 1 hard winter wheat in Kansas City will be $2.08 bu., and a net loan of $1.97 between May 26 and June 21 and $1.98 between June 22 and July 18.

The July future in Kansas City is presently at a discount of about 10¢ bu. below the indicated net loan. In fact, the July future is only about 3@4¢ above the low for No. 1 hard winter reached in Kansas City in the past season, which was $1.84 on July 1. If we assume conditions—rate of movement and low moisture—about the same as last year, it seems reasonable to expect about the same price performance on hard winters this year. The high on No. 1 hard in Kansas, reached in early February, was about $2.06, or 22¢ above the bottom of last July 1.

A special situation prevails in Texas and Oklahoma, where the market is primarily dominated by export demand. One question facing us this year is whether producers and elevators in those two states will be as eager to hold back their wheat this season as they were last year. The high on No. 1 hard at the Gulf this year was $2.26 track, and from that

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a rapid decline occurred to the present level around $2.07@2.08. The high in the season drawing to a close was 7¢ less than the peak in the previous year; a disappointment to many long holders.

A major uncertainty this year is what action will be taken on the 1962 wheat program. If Congress moves and the administration announces that the 1962 crop wheat loan rate will be substantially higher than this year, it will become an immediate market factor even though its actual effect is almost a year in the future.

That the loan was so effective last year and will likely be equally effective this season is due in main to the adequacy of grain storage. In face of the huge harvest in prospect for this year, the expectation is that storage, on farms as well as in commercial elevators, will be adequate to house the crop, except for the usual local spots of temporary shortage.

Latest Summary

The latest summary of USDA on storage approved under the Uniform Grain Storage Agreement, as of April 1, shows a total for the five hard winter wheat states of the Southwest of 2,244,641,000 bu., accounting for just about half of the national storage aggregate. The Southwest space total increased 187,996,000 bu. in the year ended April 1, including a rise of 105,596,000 in Texas and 29,358,000 in Kansas. The Uniform Grain Storage Agreement-approved storage space in Kansas as of April 1, amounted to 774,719,000 bu., leading all other states. Texas was a close second with 735,387,000.

It seems worthwhile to note that the rate of storage increase during the past year, while still large, was down considerably from the several preceding years. The main factor in this slowdown was the revised storage agreement that went into effect last June 30, imposing on commercial elevators as well as mills with storage space, an arbitrary reduction of 19% in storage rates paid by CCC.

The storage industry of this country has done an amazing job in risking capital in this expansion and it certainly does not merit the criticism that has been voiced by both government officials and the nation's press.

One aspect of the supply-demand picture deserves special attention. It is the heavy export movement of wheat and wheat products. Are you aware that in 1960-61, for the first time in U.S. history, the export movement of wheat and flour will be in excess of the total domestic consumption? It is now likely that the movement of wheat and flour from the U.S. in the season now drawing to a close will reach, if not exceed, 650,000,000 bu. This is 40,000,000 bu. more than total domestic usage for food, feed and seed and is also 100,000,000 bu. more than the previous all-time export record for a season set in 1956-57. Tentative forecasts point to exports in the 1961-62 season of around 600,000,000 bu.

As a result, the export trade, always a major competitor of millers, and consequently bakers, in domestic markets is assuming even greater importance. This is made all the more vital by the quality consciousness developing abroad, with many countries now seeking the same types of wheat needed for milling bakery flour in the U.S. In recognition of this trend, our company has been experimenting with the Zeleny sedimentation test to measure the bread-baking quality of all our hard winter wheat shipments abroad. This testing has been done for the past year or more. Also, USDA has announced a proposal to amend the grain standards procedure to permit, on a voluntary basis, the inclusion of sedimentation values of wheat grade certificates.

Price Forecasting

Along this same line is a development that should receive careful consideration in price forecasting. It is the establishment of a separate subsidy rate for hard winter wheat for shipment from the Pacific coast. This rate was inaugurated by USDA primarily to permit purchase of high protein wheats by Japan.

The Japanese, concerned over the large Canadian sales to Red China and the consequent threat of a curtailment in offerings from the Dominion, have asked our government for permission to buy our hard winter wheat of a quality comparable to Manitoba's. This special subsidy, along with the reduced freight rate on wheat moving to the Pacific coast from points in the Great Plains west of the 100th meridian, poses a special threat for supplies of milling wheat. It raises the possibility of substantial Japanese takings of wheat from the areas that have provided some of the most desirable baking quality wheats for U.S. millers. This development only accentuates the expanding quality demands from abroad.

In summary, we will have another large supply of hard winter wheat, but the price support program will be as effective, or perhaps even more effective, than in the past. The huge export demand, particularly for quality wheats, injects a new factor that makes me bullish on protein premiums. «

KANSAS STATE VISITORS who attended the dedication ceremonies and toured the new facilities of the Department of Flour and Feed Milling Industries are, left to right: H. W. Kleinsteuber, Milwaukee; William Hagenmeyer, International Milling Co., Detroit, and Sewell Willis, the Norton Co., Wichita, Kansas. Center photo are: George Hunt, General Mills, Inc., Kansas City; L. E. McCown, the William Kelly Milling Co., Hutchinson, Kansas, and W. F. Toevs, J. Allen Smith & Co., Knoxville, Tenn. At the right are: Stephen Treacy, Colorado Milling & Elevator Co., Denver, and R. D. Dickinson, Great A&P Co., Minneapolis.

LEADING FLOUR IMPORTERS ABROAD

Many of the firms appearing in this list are available to handle the importation of other products besides flour. Some specialize additionally in cereals, some in bakers' sundries and others in feed grains and ingredients. Most of them have connections in adjacent countries and are equipped to handle both import and export business on an extensive basis. For a list of recommended firms dealing in specific commodities or in specific countries write to THE Northwestern MILLER, P.O. Box No. 67, Minneapolis 40, Minn., U.S.A.

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Hambro House, Vintners' Place
LONDON, E.C. 4
Cable Address: Bortrite, London

Mardorf, Peach & Co., Ltd.
52, Mark Lane LONDON, E.C. 3
Cable Address: "Dorfeach," London

Pillman & Phillips, Ltd.
26, Corn Exchange Chambers
Seething Lane LONDON, E.C. 3
And at Bristol and Liverpool

Vaughan Thomas & Co., Ltd.
The Corn Exchange Building
52/57 Mark Lane LONDON, E.C. 3
Cable Address: "Avaumas," London

GERMANY

Einfuhrhandel Mannheim
Hans Werle
MANNHEIM/GERMANY, E2., 1-3
Cable Address: "Einfuhr" Telex 0463270

DENMARK

Brodr. Justesen
COPENHAGEN
Cable Address: "Justesens," Copenhagen

SCOTLAND

Farquhar Brothers
50 Wellington Street GLASGOW,C.2
Cable Address: "Glencairn," Glasgow

McConnell & Reid, Ltd.
19 Waterloo St. GLASGOW
Cable Address: "Marvel," Glasgow

D. T. Russell & Baird, Ltd.
106 Hope Street GLASGOW,C.2

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47-48 Damrak AMSTERDAM
Cable Address: "Cleo"

Gebrs. Van Den Bergh's N. V.
ROTTERDAM
Cables: Locomotion Rotterdam

N. V.
Algemeene Handel-en Industrie Maatschappy
"MEELUNIE"
Heerengracht 209 AMSTERDAM

N. V. Agentuur & Commissiehandel
v/h P. C. Vis & Co.
AMSTERDAM
Cable Address: "Visco"

Luchsinger, Meurs & Co.'s
Handelsmaatschappij, N.V.
AMSTERDAM– C.
Cable Address: "Matluch"

M. WITSENBURG JR. N. V.
Postbox 945 AMSTERDAM C.
Cable Address: "Witburg"

GRIPPELING & VERKLEY N. V.
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AOM Elects Alden A. Ackels As New President

Alden A. Ackels, Bay State Milling Co., Winona, Minn., was elevated to the presidency of the Association of Operative Millers at AOM's 65th annual technical conference in Minneapolis.

Alden A. Ackels

Fred Stivers, Southeastern Mills, Inc., Rome, Ga., was elected vice president.

Mr. Ackels, who told the assembled membership of the association gathered for its annual banquet that "the responsibility you have placed upon me is the highest honor I feel could be given," comes from a milling family of long standing. Both his father and grandfather were millers.

He takes over the duties of AOM president from Stuart Butler, Maple Leaf Mills, Ltd., Toronto, the outgoing president. Mr. Ackels served AOM during the past year as vice president.

George S. O. Smith, Caribbean Mills, Port-au-Prince, Haiti, was reelected as AOM treasurer. Donald S. Eber, Kansas City, continues as executive vice president. «

Pneumatic Machines For Moving Grain Sent to India

Twelve pneumatic grain moving machines, purchased through the India Supply Mission in Washington, were enroute May 22 to India, where they will handle the reserve grain supply that is being moved to that country from the U.S.

The machines, Vac-U-Vators powered by 160 h.p. diesel engines, have a grain moving capacity of 30 to 35 tons each per hour, and were manufactured by Dunbar-Kapple Division of DK Manufacturing Co., Batavia, Ill.

Six machines each will be delivered to the ports of Calcutta and Bombay. From there they will be taken inland to be used in putting wheat and other grain into storage, and for subsequent removal of the grain for distribution and processing. «

WINNER OF BUHLER TRIP ANNOUNCED

Rudi F. Brueckner, General Mills, Inc., has been named as the winner of a trip for two to Switzerland, courtesy of the Buhler Corp. Selection of the winner, and those awarded several other lesser prizes, was made at the annual banquet of the Association of Operative Millers held in Minneapolis. The expense-paid trip will include a visit to Buhler's parent company, Buhler Bros. of Uzwil, Switzerland. «

Paul H. Baum, Milling Veteran, Dies in Hutchinson

Paul Hume Baum, 76, for many years associated with the William Kelly Milling Co. of Hutchinson, Kansas, died May 24 following an illness of some duration.

Mr. Baum's career nearly matched that of the Kelly firm. He joined the company in 1907 as a bookkeeper, just two years after it was established.

He was elected secretary-treasurer of the company in 1918, and eight years later took over the responsibilities of sales manager, following resignation of Arthur S. Cain from that position. Mr. Baum continued to direct the company's sales activities for about 20 years, becoming widely known among bakers and other flour buyers throughout the country.

In 1947 Mr. Baum was appointed vice president, and in 1949 became general manager, in which capacity he continued to serve since that time.

Survivors include his wife and one son, Glenn Baum, in Oklahoma City, Okla., who is vice president of the Percy Kent Bag Co. of Kansas City. «

Study Established

A half-million dollar endowment fund from the Research Corp. has been presented to Columbia University to establish a distinguished professorship in the nutrition sciences, it was announced by Dr. Grayson Kirk, president of Columbia.

The new chair will be named the "Robert R. Williams Professorship," honoring Dr. Williams, who was the first to synthesize vitamin B_1. The professorship will be created in the Institute of Nutrition Sciences, part of Columbia's School of Public Health and Administrative Medicine.

Dr. Williams' accomplishment was the first that made sufficient synthetic vitamin materials available for the enrichment of white bread.

The endowment fund was presented to Columbia by J. William Hinkley, president of the Research Corp. foundation. The endowment is supported jointly by the Williams-Waterman Fund for the Combat of Dietary Diseases, and the Research Corp., which administers the Williams-Waterman Fund.

Dr. Kirk said that establishment of the endowed chair will insure continued growth of the Institute of Nutrition Sciences and its teaching and research programs. «

CLASSIFIED DEPARTMENT

Advertisements in this department are 20¢ per word; minimum charge, $3.00. (Count six words for signature.) Add 25¢ per insertion for forwarding of replies if keyed to office of publication. Situations Wanted advertisements will be accepted for 15¢ per word, $2.25 minimum. Add 25¢ per insertion for keyed replies. Display Want Ads $20 per inch per insertion. All Want Ads cash with order.

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Major milling company needs men capable of operating cake and specialty section of a large wholesale bakery, also bakers experienced in retail bakery and specialty shop operations. Some college preferred but require at least high school and trade school education. Must be free to travel calling on bakery trade to demonstrate and service new line of bakery products.

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Bakery standard patent	5.05@5.15	5.45@5.55	6.01@6.16	...@...	...@...	...@...
First clear	4.40@4.60	4.80@4.95	5.05@5.15	...@...	...@...	...@...
High gluten	5.40@5.50	5.80@5.90	6.36@6.49	...@...	...@...	...@...
*Family	6.15@7.20	...@7.20	6.90@7.20	...@...	...@...	...@...
*Bakers fancy cake	...@...	...@...	...@...	...@...	...@7.75	...@...
**Straight grade cracker flour	...@...	...@...	...@...	...@...	...@...	...@...
**Pastry	...@...	...@...	...@...	...@...	...@...	...@6.20
Rye, white	...@...	3.89@3.99	...@...	4.17@4.27	...@...	...@...
Rye, medium	...@...	3.69@3.79	...@...	3.97@4.07	...@...	...@...
Rye, dark	...@...	3.14@3.24	...@...	3.42@3.52	...@...	...@...
Semolina	...@...	...@6.10	...@...	...@...	...@...	...@...

	Toronto	Winnipeg
*Spring top patent	$6.30@6.35	$6.25@6.45
**Bakers	5.00@5.15	4.76@4.95

MILLFEED

May 24 Quotations, Based on Carlots, Prompt Delivery

	Minneapolis		Kansas City		Chicago		Seattle	
	Sacked	Bulk	Sacked	Bulk	Sacked	Bulk	Sacked	Bulk
Bran	$37.50@38.00	$32.50@33.00	$36.00@36.50	$27.50@28.00	$36.00@36.50	$30.00@30.50	$....@....	$....@....
Std. midds.	36.50@37.00	31.00@31.50	....@....	28.00@28.50	38.50@39.00	32.50@33.00	....@....	....@....
Red dog	42.00@43.00	....@....	....@....	....@....	46.00@46.50	....@....	51.00@52.00	47.00@48.00
Shorts	....@....	....@....	37.00@37.50	29.50@30.00	....@....	....@....	....@....	....@....
Millrun	....@....	....@....	....@....	....@....	....@....	....@....	43.00@44.00	39.00@40.00

	Bran	Shorts	Middlings
Toronto	$48.00@50.00	$49.00@51.00	$54.00@55.00
Winnipeg	37.00@38.00	38.00@39.00	41.00@42.00

*Flour prices 100 lb. cottons.
**Flour prices 100 lb. papers.

G-F Elevator Co.
GRAND FORKS, N. D.

MODERN STORAGE
and
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5,000,000 BUS.
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GRIST of GRINS

Two commuters had drunk too much at the station bar, missed their train, and decided to stagger home along the tracks. After it got dark, one of them forgot where he was. "These are th' longish shtairs I ever climbed," he complained. "I don' min' th' shtairish," his comrade groaned. "Ish these low banishters that get me."

◆ ◆ ◆

It's hard to believe that just 100 years ago people were crossing this country in wagon trains. Today we can shoot a rocket into space at 25,000 miles an hour, and nobody's looking . . . They're all home watching "Wagon Train."

◆ ◆ ◆

Mandy took out a life insurance policy on her husband and every three months a collector came around to get the premium.

On his fifth visit, Mandy said angrily, "This ain't fair. Every time Ah saves up enough money to buy a gun, you come around and take the money away from me."

◆ ◆ ◆

New Yorker (incredulously)—"And you mean to say that in California you have 365 days of sunshine a year?"

Man from Los Angeles—"Exactly so, sir, and that's a mighty conservative estimate."

◆ ◆ ◆

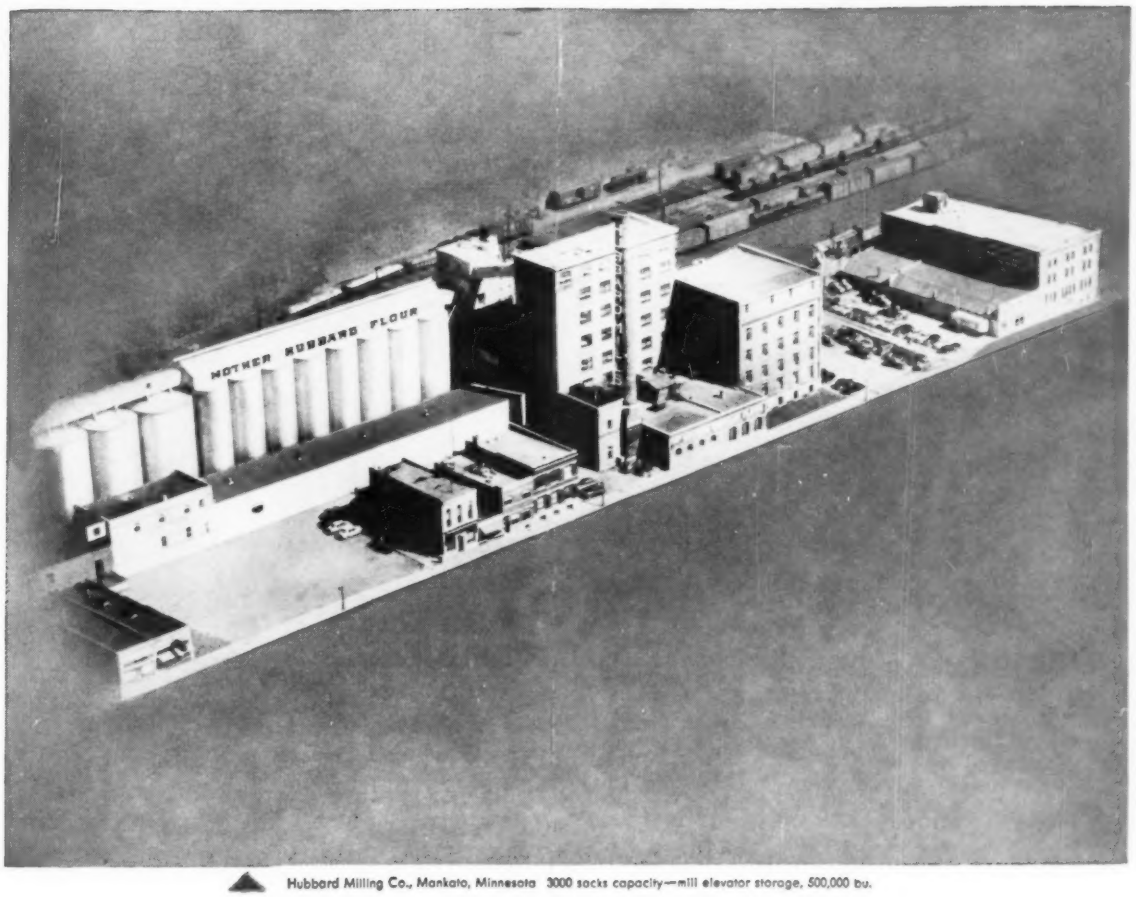
At 2 a.m., a voice was heard at the door: "Wifey, darling, your husband is home."

"Have you been drinking?"

"Absolutely not."

"Let me hear you say, 'Perfect pigskin passes provide precious points promptly'."

"I'll sleep on the step."



Hubbard Milling Co., Mankato, Minnesota 3000 sacks capacity—mill elevator storage, 500,000 bu.

Mill employee setting single control of Dyox machine for maturing flour.

HUBBARD MILLING CO. KEEPS CUPBOARDS FILLED WITH THE HELP OF

W&T Flour Treatment

Hubbard Milling Co. uses dependable Wallace and Tiernan processes and equipments to send a steady flow of fine flour products to its customers. This mill knows the benefits of doing business with a firm of single-line responsibility — with manufacture, sales, and service under one roof.

At Hubbard Milling the W&T Dyox® Process is used to generate and apply chlorine dioxide gas accurately and uniformly... matures the flour for best performance in bread baking.

Novadelox®, chosen for its bleaching efficiency, is fed through mill-proved NA Feeders for peak color removal and best color dress. Similar feeders apply "N-RICHMENT-A"® for the addition of vitamins and minerals.

Hubbard Milling Co. is only one of the many milling companies using W&T Flour treatment. If your mill is not one of these, investigate the advantages of Wallace & Tiernan's complete flour service.

NOVADEL FLOUR SERVICE DIVISION
WALLACE & TIERNAN INCORPORATED
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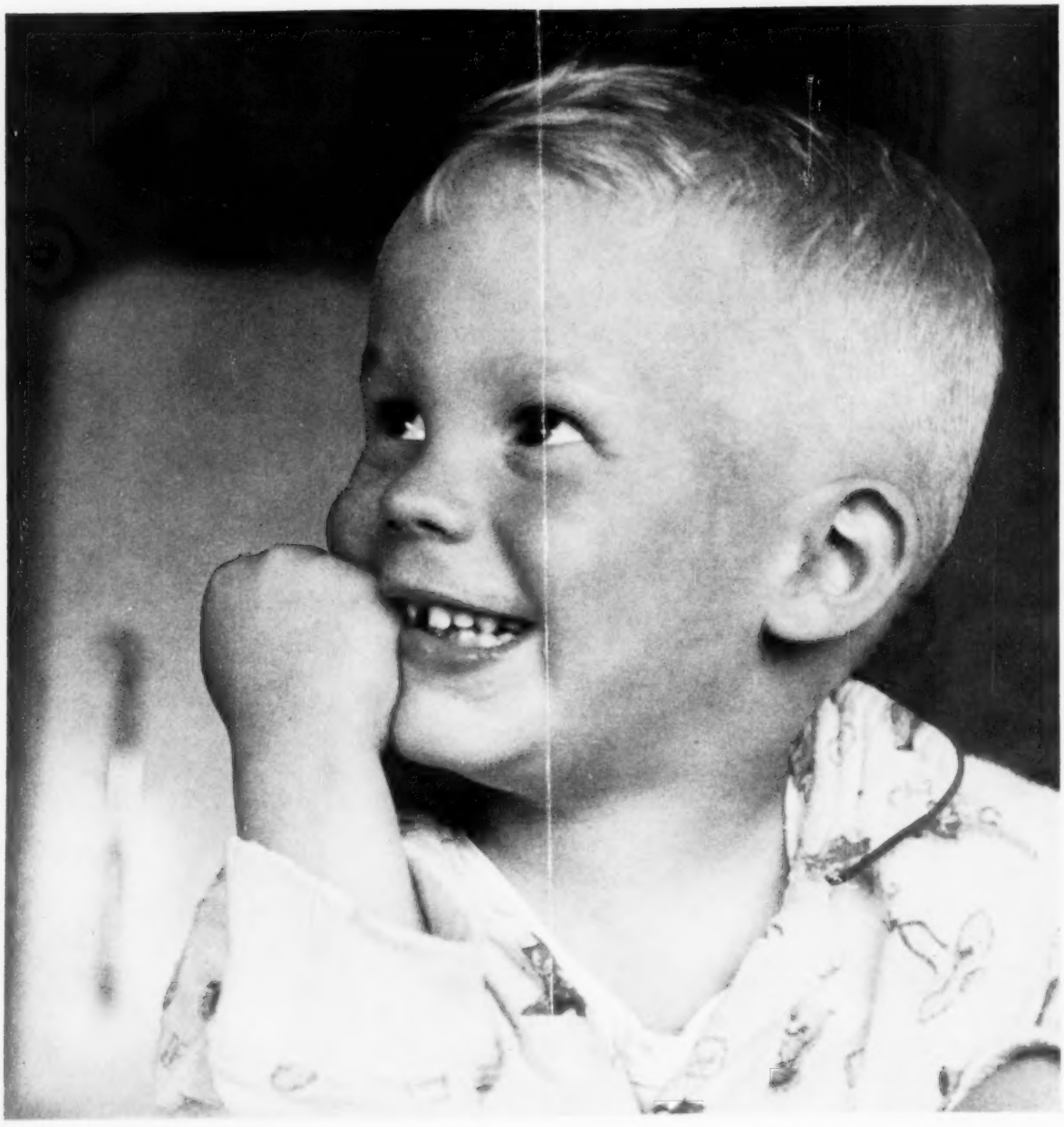
N-115.64



Today's Bread is Building Men for Tomorrow

Here's the guy you're baking for, first and foremost. He needs good bread to grow on, to replace the bubbling energy he's working off every minute. Good modern American bread, from golden grain-rich wheat flour.

But modern Americans didn't discover bread. Even primitive peoples recognized its life-giving, satisfying goodness, crude and coarse as their bread was. They pounded the grain laboriously between stones, cooked it on hot ashes or stones. It was worth the trouble.

Now there *is* no trouble. Fine-textured, delicious bread comes daily from the bakery for a wonderfully modest price. And this is good, this is progress; for bread is the staff and stuff of life.

General Mills is proud to be part of this progress.

Good eating will always begin with bread

General Mills